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Tros Tyriusve mihi nullo discrimine agetur. VIRGIL.

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7. *A Letter to the Right Hon. F. Robinson, M.P. on the Plague and Contagion, with Reference to the Quarantine Laws; including the History of Plague conveyed direct from the Levant to five European Ports of the Mediterranean, within the last Six Years; and also a detailed Account of the Experiments made on the Subject of Contagion in Plague, by Deidier, Samoilowitz, Desgenettes, Dr. Whyte, Dr. Valli, Dr. Maclean, and Mons. Rosenfeldt. By A. B. Granville, M.D. F.R.S.* London, 1819.

8. *Observations on Contagion, as it relates to the Plague and other Epidemic Diseases, and refers to the Regulation of Quarantine. By a Physician.* London, 1819.

In reading the remarkable descriptions which Hume, Maitland, De Foe, and more lately the excellent Evelyn, have given of the great plague of London, we naturally advert to the long exemption this country has enjoyed from a disease, which during the last century has traversed the whole continent of Europe, and in its career of desolation and death has spared no country within its bounds. But impressions the most vivid become weakened by time, and a remembrance of these days of despair has been gradually declining with each successive generation, till we have arrived at designating by the term of restraints upon commerce, those precautions, which the wisdom of our ancestors provided for our security.

If the doctrine of non-contagion were as clearly proved as

its most ardent advocates could wish, we should be inclined to hesitate before we proposed the safety of a nation as the test of a theory; but as it is, firmly believing that every additional light which history or experience throws upon the plague, more fully proves its contagious nature;—observing the ravages which it is making in the east, and convinced that if it be kept out of Europe it is solely by the severity with which the quarantine laws are enforced: and, notwithstanding the favourable circumstances under which England is placed in regard to climate and situation, seeing nothing which can absolutely ensure her from it, we are anxious to add our testimony on the subject, by giving some account of the plague as it lately occurred in Italy, where it strongly exemplified the doctrine of contagion and the importance of medical police in its prevention and suppression.

Few countries of Europe are from their situation more liable to the invasion of the plague than the kingdom of Naples. Its vicinity to the Ottoman provinces, and the opportunities which its extended coasts afford for illicit traffic, peculiarly expose it to this dreadful disease. In less than a century and a half it has three times been visited by the plague, and nearly at regular intervals. In 1656, the plague broke out at Naples; in 1696, at Conversano and its neighbourhood; and in 1744, appeared at Reggio and Messina.

After the peace of 1815, considerable apprehensions were occasionally entertained in Europe respecting the progress of the plague, which, from Egypt, had already extended to several towns and provinces of Turkey, and had even appeared in Epirus and Dalmatia. The necessary precautions were immediately adopted by the Neapolitan Government. A cordon was established along the Ionian and Adriatic shores, and the quarantine laws which had been adopted in 1813, when the plague raged in Malta, were again put in force. These regulations, related to the intimation which all were bound to convey to Government of the appearance of a pestilential disorder. The symptoms of a disorder coming under this description, were thus characterized in the regulations:—

1. Burning fever, terminating in death within twenty-four hours, or at farthest two days; unless a coup de soleil or excess of spirituous liquors can be clearly traced as the cause.

2. Burning fever with general prostration of strength, accompanied with the rising of a bubo, carbuncle, or boil, before the seventh day, and without alleviation of the patient.

3. Fever, brought out by gangrenous spots on the second or third day, accompanied by debility, and terminating in death before the seventh day.

4. Burning fever with cold extremities and complete prostration of strength, contagious in individuals in the same family, and fatal before the seventh day (excepting cases where such symptoms are produced by poisonous or putrid food).

On a disease appearing, characterized by such symptoms, the different authorities were enjoined by all possible means to insulate the spot where it might appear, and prevent its farther extension. Notwithstanding these precautions, intelligence was received at Naples on the 27th of December, 1815, of the appearance, in the town of Noya, of a disorder, the character of which was very suspicious. The physicians who were dispatched by the Governor of the Province to investigate the subject completely mistook its real nature, for they declared it to be a common exanthematous putrid fever, contagious by actual contact for those predisposed to it. At this period only four persons had died of the complaint, and the extreme poverty of these had prevented them having recourse to medical assistance till within a few hours of their death: among them was a woman with a child at the breast, who remained in perfect health, although it had continued to suckle to the last moment.

On the 1st of January, 1816, the nature of the disease became but too evident. It showed itself as a pestilential fever, which proved fatal in two, three, or at most seven days. Ten persons more had already died, and nine were sick. The disorder first manifested itself in a gardener, named Liborio di Donne, who died on the 23d of November; his wife died on the 24th, and other individuals caught it from this family.

The town of Noya, in the province of Bari, and in the 41° N. latitude, is situated on a gentle rise in an extensive plain, about five miles from the Adriatic Sea, and is surrounded by gardens. The old town is of an irregular polygonal form, and the whole circumference of inhabited ground may be computed at 800 fathoms. The prevailing winds are S.E. S.W. N. and N.W. There are no springs: rain water preserved in tanks and cisterns is the only water of the inhabitants. The soil consists chiefly of chalk with strata of clay and red sand. Its chief products are almonds and olives, and oil forms a very considerable part of the exports: cotton, however, is the principal article of trade. The neighbourhood is fertile and well cultivated: good wine is produced from the surrounding vineyards, and from the advantageous position of the city, a brisk and flourishing commerce is carried on. The inhabitants are robust and well

made, and many of them attain a very considerable age—seventy, eighty, and ninety years. Noya is a place of great antiquity, being supposed to be a colony of the ancient Cattaro, which was a flourishing city on the coast of the Adriatic.

Nothing could be more distressing than the circumstances which concurred in aggravating the misery of the inhabitants, and in defeating the precautions and efforts which were made for the extinction of the malady; for it occurred at a moment when the political circumstances under which Europe was placed, and the transition from a long and destructive war to a peace disturbed by internal commotions, had by no means restored the machine of Government to its perfect and healthful operation. The harvest had been unfavourable in all Europe, and several provinces of Naples were even threatened with famine; thus, whilst the free importation of provisions was most necessary, all confidence in trade became necessarily suspended; add to this, that the real nature of the disease had been concealed, or what is worse, mistaken for thirty-seven days.

If these general circumstances concurred in aggravating the calamity, the local and particular ones under which Noya was placed, were no less unfortunate. Large quantities of cotton, of all articles the most susceptible of contagious matter, had been dispatched to different parts of the kingdom, and even to the metropolis. The great fair of Bari, which takes place at this period, attracts merchants from all parts of Europe, and the festivities of Christmas, in Naples, as in all catholic countries, add to the intercourse between the inhabitants of different provinces. But the most serious danger was apprehended from seventeen families, who, less credulous than their fellow-citizens, escaped before the cordon was established, and spread terror into the different provinces where they concealed themselves.

The complete insulation of the place was the first measure adopted, and this was effected by means of a cordon of troops stationed at the distance of ninety fathoms from the town. Within this line two broad trenches were dug; the one at sixty the other at thirty fathoms distance from the walls, completely encompassing the town. The only passage over these was by a draw-bridge, in a direct line with the great gate of the city. Whoever attempted to pass the trenches was exposed to inevitable death from the centinels who were posted at short distances, and who were also commanded to fire on all cattle, poultry, or animals, who might attempt to pass. The indispensible severity with which the regulations, which had for their object the suspension of communication, were enforced, may be judged of by the following anecdote: An inhabitant of Noya

threw a pack of cards over the trench to a serjeant of the Prince's regiment. A soldier took them up. Not only the serjeant and soldier, but the piquet of eleven men were sent to the observation hospital. The inhabitant who threw the cards, and the soldier who picked them up, were condemned to death by a court-martial and executed.* At night, not only patroles guarded every part of the trenches, but watch fires and lanterns rendered every attempt to profit by the darkness abortive. All provisions destined for the city were conveyed over the drawbridge, and from thence removed by the inhabitants to their destination; nothing was taken in return but letters, and these were previously fumigated and steeped in vinegar.

The second cordon was established at the distance of ten miles, and was composed of piquets of soldiers placed half a mile from each other; a communication was kept up by means of soldiers who were within sight of each other. Every traveller was required to produce a strict certificate of health before he was allowed to pass.

The third cordon comprehended the whole province of Bari. All goods which had been dispatched from Noya were stopped and destroyed, and the seventeen families above mentioned were discovered and put under the strictest surveillance. We have already observed that attempts were made to conceal the real nature of the disease; in consequence of which, those who died were buried in a small church situated outside the town. After the cordon was established, this fact was first discovered, and also that the church in question was in the rear of the first line. Criminals, condemned to death or hard labour, were employed to cover these graves with pitch, sulphur, and chalk; to burn all the woodwork and paintings in the church, and to white-wash the walls. Round the spot where all the different articles were burnt, as in the two pits which contained the dead, a wall was built, on which was inscribed :—

SEPOLTURA DE PESTIFERI
MORTE
A CHI L'APRISSE.

The interior of the city was divided into eighteen sections, six of which were declared unhealthy, and twelve healthy; but

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* In Dr. Granville's excellent pamphlet on the Quarantine Laws, we find some additional circumstances detailed which Dr. Schoüberg, from whose work we extracted the anecdote, does not mention. Dr. Granville, after relating the fact, adds, "The consequences were most fatal to the latter (the soldiers), for three of them died of the disease shortly after, and two more lingered with it in the lazaretto for some time."—pp. 65. 66.

occasionally these latter produced a patient or two. In each section a commission of health was chosen from among the inhabitants, whose duty it was to correspond with the general commission. There were three hospitals—the Observation, the Convalescent, and the Pest Hospital. To the former of these were conveyed all who laboured under any ordinary disease, whatever might be their rank or station. Round the pest hospital two trenches were dug which it was forbidden to pass; the physicians and attendants had no communication from without; provision and medicines were received into the house with all precaution, and only letters and money were permitted to be returned from within. The attendants were desired to wash themselves frequently with antiseptic vinegar and oil, and to avoid communication with the infected, and even with each other.

The number of medical attendants not being considered sufficient, a physician, surgeon, and four assistants, were dispatched from Naples. Two regimental surgeons also volunteered their services, and the whole distinguished themselves by the fearless intrepidity which active benevolence alone can bestow; indeed, so far did they carry this feeling, that the Government was obliged to restrain their zeal. They wore, as did the inspectors and commissaries, oil-skin caps, mantles, masks and gloves; and carried a spear in their hands, for the purpose of killing any patient who in a fit of delirium—and the case really happened—might attempt to seize the physician or attendants. In feeling the pulse, the hand was besmeared with oil, and a tobacco leaf laid between the pulse and finger.

The dead were conveyed on a bier to the place of interment, and buried without any religious ceremonies in a large pit; on the bodies, as deposited, quick lime was thrown. All animals were killed except twelve horses, who were reserved for the service of the sick. With all these precautions the comfort of this unhappy city was not forgotten: 4,000 rations were daily dispatched from Rutigliano for the inhabitants, and every thing done which the most active sympathy could suggest. Ships were kept constantly cruizing in the channel of Messina, to prevent the passage of all vessels coming from the Ionian Islands, from the whole coast of Dalmatia to Trieste (exclusive), and from the shore of Noya to any part of the kingdom.

The symptoms observed at the first appearance of the plague were, "Fever with delirium, pain over the eyes, great prostration of strength, diarrhœa and vomiting, accompanied with buboes of the groin and arm pit, rarely spots or petechiæ."

Up to the middle of January, 134 persons died, and none re-

covered. Symptoms of suppuration, however, now began to appear in some of the buboes, and the hopes of the physicians to revive. Some died on the second, third, or fifth day, others on the first day; a few cases of sudden death, and some as early ten hours after the invasion of the disease, were also observed.

On the 18th of February the disease appeared to have reached its heighth, and began indeed to diminish. The judicious means employed by the Government, together with the north wind which set in, appeared to check its farther progress. At this time 80 were sick, 115 had died in the course of twenty-two days, 42 were convalescent, and 342 under observation. On the 15th of March the disease returned with redoubled violence. On the 30th it again diminished, and the last death took place on the 7th of June. On the 12th of June the number of patients in the hospital was reduced to six, the majority of which were out of danger. On the 17th of July the city was perfectly healthy.

On the appearance of the plague the population of Noya was 5,413: of these, 921 were attacked by the plague, and out of this number 728 died, and 193 recovered.

The disease appeared under the following forms:—1. Hot nervous fever. 2. Synochus, rapidly running its course. 3. Fever with gangrenous and malignant boils. 4. Fever with carbuncles.

The symptoms of the patients who came under the first class were sudden and complete prostration of strength, delirium, vomiting, convulsions, and violent diarrhœa. Such died in a few hours, few survived a day, and all medical assistance was useless.

The patients of the second class were seized with fever, debility, vomiting, restlessness and anxiety, red and dry tongue, with a black streak in the middle; and after one, or two days at farthest, dark spots bordering on black appeared. Such cases were, however, rare, for in seventy-three cases there was no appearance of exanthemata. All means employed by the physicians in these cases were unsuccessful.

To the third species belonged those who were first attacked with fever, characterized by the above mentioned symptoms, and on whom, on the third or fourth day, spots or boils appeared, which quickly became gangrenous. Such cases inevitably proved fatal on the fifth or sixth day. Neither the knife nor the actual cautery, antiseptic nor discutient remedies had the least effect on them. In one solitary case, the application of vinegar and water to the boil, and a strong decoction of bark internally administered, appeared to afford hopes of cure, but we are not told if the patient recovered.

Under the fourth class were comprehended those cases where the patients were seized with the same symptoms of fever as in the other three classes; but in which, on the third or fourth day, the glands of the arm pit and groin began to swell, and became so many carbuncles. As these increased, the strength appeared to revive, and the patient arrived at the seventh day. If, at this period, the swelling gave signs of suppuration, hopes of amendment might be entertained, which were always proportionable to the progress of suppuration. If on the other hand, after the seventh day, the carbuncles did not run on to suppuration, the strength began again to fail, and the patients died between the ninth and tenth day. Poultices of oil were useful in the one case, and emollient applications in the other.

"Tonic medicines, musk, laudanum, and camphor, were sometimes of use in these cases. In the first stage anodynes were used with effect, but antimony and all diaphoretics were absolutely useless. It was singular that in no one case critical or symptomatic perspiration was observed. Purgatives were decidedly injurious: a strong decoction of bark in the early stages, and the powder in the latter periods of the disease, was productive of very beneficial effect. The treatment was varied according to the form the disease assumed; thus in the stage of irritation, the gently weakening, or rather the indirectly strengthening, were of great advantage, so that a patient labouring under delirium became instantly quiet when affused with vinegar and water. Occasionally besides the boils, anthraces appeared in different parts of the body: in women these were observed on the breasts, and in men on the back and shoulders."

It has generally been observed, that although women are more exposed to contagion from their close and intimate attendance on the sick, they are less susceptible of it. It is probable that the courage which impels them to minister at the dying bed—

> ——————— from which with an unnatural cowardice
> Affection, ardent in the times of joy,
> Had fled—perhaps to stumble o'er the grave,

proves their best and surest defence; for fear has even been observed to increase the susceptibility of contagion and lessen the probability of recovery. Now the plague of Noya presented a remarkable anomaly in this respect, for women were its first and most frequent victims. Children, and this is also a deviation from common observation, were attacked in about a similar proportion. To these, in the degree of liability, succeeded young robust people, and old people were most exempt. The old, and young children all died. Pregnant women, after bringing

forth an untimely child, likewise perished; but women in childbed were singularly fortunate.

A circumstance was observed, which is curious in itself, and which gave rise to much physiological speculation, namely, that the patient when desired to show the tongue, invariably protruded it on the side of the body on which the bubo or carbuncle was situated. The reasoning attempted to be deduced from it, relates to the correspondence and independence of the organs of each side; but as it is neither new nor interesting, we shall not trouble our readers with it. The fact is curious, and from the attention which it excited is not likely to have been mistaken. From the 18th of February to the end of March, as we have observed, the disease continued to increase. Several local causes having their origin in the peculiar construction of Noya, appeared to contribute to it. Up to this period, 209 had died, 53 were sick, and 584 under observation. While the north wind continued, the symptoms mitigated a little, but reappeared with redoubled violence on the south wind returning. The faculty remark that this circumstance has been invariably observed in all pestilential diseases, and is sanctioned by the authority of Hippocrates and Sydenham. It appears to us, however, that it depends much upon the geographical position of a place. In the very northern and insular situations, the influence of this wind upon the increase or decrease of the plague is very different from what is observed in the south.

There existed no difference of opinion respecting the nature of the disease. All the physicians were unanimous in pronouncing it to be the true Egyptian plague. "After traversing the different hospitals," observes the physician sent to Naples, "it was impossible to doubt for an instant the nature of the malady—it is a contagious pestilential fever, transmitted from another country by means of infected goods." A most diligent examination into the circumstances attending its introduction, was instituted by the authorities. It appeared as the result of these inquiries, that a corvette from Smyrna had landed some contraband skins of leather on the open beech, between Bari and Mola, which Luzio Mastrogiacomo, of Noya, conveyed into his warehouse. The family of Serino, who lived in the house immediately adjoining this warehouse, were the first who were taken ill. Laborio di Donne and his wife were related to Serino, and had borrowed a bed from them. Pasqua Capelli, wife of Liborio, was the first victim of the malady. Luzio Mastrogiacomo was subsequently arrested at Bari, but died in prison there, (not indeed of the plague), before he con-

fessed any thing. His exemption from the malady may be attributed, perhaps, to his having gone to Lecca immediately after the landing of the smuggled goods, where he remained till he was arrested. The man who received it into his warehouse died, together with all his family.

Another evidence of the nature of this disease was, that two species of fever, with which it might have been confounded, were raging epidemically at the moment, and afforded ample opportunities of comparison. The first was the endemic and sporadic fever of Italy; in this the glands occasionally swelled, but always after the fifth day; and, indeed, the parotids were the principal seat of such swellings. These were, however, only occasional and not characteristic symptoms. The whole aspect of the cases was different, and much milder.

The second was an epidemic disease which broke out at Cagliari, and excited considerable uneasiness. It had none of the characteristic symptoms of plague, but as it attacked a great proportion of the inhabitants, and until the beginning of April swept away twenty to twenty-five persons a day, the quarantine laws were extended to all ships coming from Sardinia, and with such severity were these put in force, that the daughter of the king of Naples, who arrived in the Bay of Naples from Sardinia, was, by order of her royal father, submitted to the usual regulations, and a beautiful country house on the shore of Portici, was hastily formed into a lazaretto for the accommodation of her royal highness.

The attack known under the name of coup-de-soleil, putrid fever, typhus, and a malignant species of measles, are the other fevers common in the kingdom of Naples. As to some of these it was not the season of the year at which they appear, and the others are so totally different in their symptoms, as not to leave a shadow of doubt as to their real nature.

We might bring forward many circumstances in corroboration of the opinion to which these facts imperiously lead, but we have been careful in selecting only such as rest on incontrovertible evidence. The only deduction which an unbiassed mind can draw from them, is that this was the real Egyptian plague, imported by infected goods, and spreading by contagion. How many useless and dangerous discussions on the nature and treatment of disease might have been spared, if more attention were paid to the modifying influence of climate, national habits and morals. We admit, indeed, the effect of these agents, but we neglect to put our belief into practice. How often do we hear physicians reason on a disease which is raging in a distant country, declare that it is not the complaint

which it is described to be, and boldly censure the practice of the physicians of the country. So it is with the plague. We conceive the plague of Noya to have been a more genuine specimen of the plague than that which occurred at Malta, but we do not the less doubt of the identity of the disease at the latter place, because the character of the complaint were not so decided, or did not assume the same features. These remarks, though loosely thrown together, are of great practical importance, for a doubt of the nature of the plague will lead, as it has led, to a doubt of the utility of those preventitive means which have been sanctioned by the approval of all nations, and confirmed by the test of long security and experience.

In regard to the medical treatment pursued, we do not profess to understand it. The accounts given on this subject are extremely contradictory. Thus Schönberg tells us in one place that antimony was useless; in the next page he quotes, with approbation, the report of the physicians sent from Naples, who there recommended tartar emetic, and in other places he brings forward the authority of Panvini to advocate the use of James's powders. As far as we can judge, the treatment appears to have been empirical, and the physicians on the spot have acted more on the advice they received from the faculty of Naples than on what they observed in the hospitals.

The work of Dr. Panvini, of Palermo, relates to the plague of Malta, but we have prefixed it to this article, because it was reprinted during the plague of Noya, and is often referred to by those who have described the latter plague. Dr. Panvini commences his work by commenting on the bad effects of fear in the plague. He then gives an account of the plague and of its operation on the body. He particularly dwells on the prophylactic and preservative means to be employed, and gives the opinions of antients and moderns on the subject. After pointing out the futility of many pretended means of security, he strongly recommends rubbing the whole body with olive oil. "But the discovery of the true preventitive," adds our author, "was reserved for modern times. Chemistry has clearly proved to us, that the real principle which destroys the plague, is oxygen. It was always observed, that infected goods lost their contagious power by exposure to the air. Now, Lavoisier discovered that the air was a compound of oxygen and azot. Fourcroy believed that all animal substances felt the operation of oxygen as the principle of acids, and that these substances deprived all other bodies containing oxygen of this principle, and thus acquired new chemical properties. Arguing

upon these facts, and presuming that the principle of contagion is animal matter, it follows that oxygen must disengage it, and that therefore all bodies containing oxygen must be the means of preventing infection." This theory is prefixed to a recommendation of the plan of fumigation introduced by Dr. Carmichael Smith, and Guyton Morneau, which we are informed is universally applied to the purification of infected articles, all over the continent. In Spain, Gimbernat and Aregula; in the south of France, Bethes and Andere; in Germany, Harless promoted its adoption.

As to the cure of plague, Panvini remarks that the fever accompanying is the highest degree of true nervous fever. Blood-letting is not admissible except where it is complicated with pneumonia. Antimonials, such as James's powders, in a dose of four or five grains every hour, he considers as the best remedy. The acids, particularly sulphuric acid, are recommended in doses of twenty drops every half hour as the grand specific. This administration of acids must be persevered in till a crisis is induced. Bark may be given in conjunction, if required. Washing the whole body with vinegar and aromatic decoctions is also much insisted upon. Panvini advises that the buboes should be opened when ready with a lancet or hot iron. Suppuration, of course, to be diligently promoted.

If Panvini's work be deficient in many respects, those of Zocchi and Romani are still more exceptionable. Their theories, for they all think it necessary to form a theory for the occasion, are founded on strict Brownonian principles. Zocchi recommends muriate of mercury in large doses; and Romani, after dividing the disease into the sthenic and asthenic, advises mild acids for the first or mild degree of the former; in the second species, antimonials, with cold baths; and in the highest species of the sthenic, blood-letting, cold water and ice to the whole body. In the asthenic, opium is his principal remedy, and after this camphor, ether, and volatile oils, &c. &c. As to preventitives, Romani thinks with Crato that the true alexipharmacon of the plague is only to be found with God, and agrees with Furnio that nothing is more hurtful than a variety of medicines.

But we need not detain our readers longer with these loose and vague ideas. To enumerate the remedies proposed, we should have to detail all the preparations in the pharmacopeia. As far as we understand the subject, the plague is a disorder which is so much varied in its character by different circumstances, as peculiarly to require that species of treatment to which the name of rational empiricism is given; but this is as far removed from

a mere treatment of symptoms as it is opposed to the blind slavery of theory. While it acknowledges an entire submission to nature, and to the varieties she may assume in her laws, it implies knowledge to understand these laws, and skill to observe their variations.

The work of Dr. Schönberg, who is, we believe, a Danish physician, settled in Naples, is much more interesting, for it is a plain collection of facts, drawn from the best sources of information; put together, indeed, with haste; but, apparently, with fairness and impartiality.* To this work is added a most interesting little memoir, drawn up by an officer on the Austrian staff, and comprehending in the space of ten duodecimo pages, more information than all the other works put together. The name of the author is not mentioned; it is a plain narration of the plague of Noya, and is quite a model for concise and clear writing.

There exists among the lower orders a strong disbelief in the efficacy of any preventitive means against the plague. The best antidote to such opinions may be found, perhaps, in the history of the Marseilles plague,† which raged at the same time in the town, the neighbouring villages, and the galleys. The inhabitants of the town and villages, who enjoy peculiar good health, were swept away in great numbers, from their unwillingness to employ any preventitive means, while on the galleys, the seat of the most deplorable misery, where 10,000 men were confined in a space so small as hardly to allow air to breathe, the proportion of deaths was infinitely smaller, because they were obliged to submit to such regulations and treatment as were judged necessary.

The comparative small number of deaths in Noya, which was submitted to the strictest medical police, may shew us the necessity of combating despair, and of not being deterred from every measure likely to arrest or suspend its progress; and if we do not speak in very favourable terms of the medical treatment as given by the authors from whom we have extracted the accounts of it, we cannot eulogise too highly the medical police—the means taken by the Government to prevent the extension of the plague, and the conduct of those who were charged with the execution of such arduous duties. If we consider the virulency of the symptoms—the long duration of

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* Dr. Schönberg's Work has been published in Germany by Dr. Harless, who has prefixed to it a very learned preface.

† Relation Historique de la Peste de Marseille en 1720. Cologne 1721. S. 82.

the disease—and the unfavourable circumstances under which it appeared, we shall be more fully capable of appreciating the measures adopted. They were in the highest degree judicious, prudent, and effectual. It was fortunate for the town of Noya, that the kingdom of Naples was, at this period, occupied by the Austrian army, for all was conducted with greater energy and vigour than the Neapolitan Government are in the habits of displaying.

We are indebted to the states of Venice for the institution of quarantine laws. These, we are informed by Muratori, were first established in 1478; according to Russel, in 1484.* The lazaretto vecchio on the Lagunes, is the oldest pest and quarantine house in Europe; 150 years later a new and more commodious house, with adjoining buildings and offices (lazzaretto nuovo) was erected on an island more distant from Venice. The accommodation in these Venetian lazarettos is neither very elegant or convenient; but in the discharge of the purpose for which they are erected, great care and attention is paid, and if they became so bad in the last periods of the Republic, as Howard leads us to suppose, the interest of Austria will, no doubt, lead her to extend to them the benefits which the other institutions in her dominions enjoy.

On the model of the Venetian lazarettos were formed the different quarantine establishments in the Mediterranean. Some of these, such as Marseilles and Genoa, have been since enlarged and improved, and the management is superior to the Venetian. The best quarantine regulations are those of Marseilles; next comes Genoa, the lazaretto of which is a very fine building. The two pest houses of Trieste, and that of Livorno, fully deserve the praise which travellers and writers have bestowed on them. After these come the pest lazarettos† of Naples, situated on the island of Nisida—those of Malta, Messina, Palermo, and Ansona.

The improvements in quarantine and pest houses have been gradual, and in general the result of the melancholy effects produced by their inefficiency. Thus, the plague, which in the years 1720—21, desolated the coast of Provence, and particularly the towns of Marseilles, Toulon, and Aix, was one of the most virulent and destructive which has been brought into

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* According to Bocaccio (see the Decameronee, S. 2.) ordinances and regulations were issued as early as 1348, at Florence, in respect to the plague, which then desolated Italy, but no quarantine.

† In Dr. Granville's pamphlet our readers will find a sketch of a lazaretto.

Europe during the last century. It gave rise to the comprehensive and excellent quarantine laws, which have so long formed the security of these towns and the other seaports of France. The precautionary regulations which existed previous to that period, against the plague, were neither enacted with judgment, nor enforced with exactitude. It was more from this deficiency than from the ignorance of the physicians that the disease, which was at first confined to the quarantine lazaretto, in the harbour of Marseilles extended from thence by the means of illicit traffic to the town of Marseilles, and subsequently to Toulon, and raged with such virulence as to sweep off in a short time, at least half the inhabitants of Marseilles, and nearly two-fifths of those of Toulon—16,000 out of 26,000. It is computed to have carried off altogether 200,000 individuals in Provence. Those who wish for farther information respecting this dreadful scourge, may find it in the writings of Chicoyneau, Deidier, Bertrand, and Verney, who have written on the plague of Marseilles; and of Antrechau, who has given a lively view of it as it occurred in Toulon. The last mentioned writer was not a medical man, but was a careful observer, and contributed greatly to the improvement of the quarantine laws in general, and of those of Toulon in particular, of which he was subsequently director. By his exertions, energetic measures were taken to arrest the progress of the plague. The military were summoned to assist, and he collected all the information which the scanty knowledge on the subject at that time afforded.

Every precaution was taken to separate the healthy, the sick, and the suspected, and to diminish the communication of the plague, which took place in the indispensible transport of provisions. All public buildings were insulated by sentinels, pest houses were erected, and a military cordon was drawn round Toulon, but it was already too late. The disease soon reached and passed the cordon, and spread to all the neighbouring villages. There were too many hospitals (seven), and these were at too great a distance from each other; one, indeed, was in tents pitched upon an open piece of ground, where hundreds of infected and suspected persons were crowded together, and all died. This spot was long known by the name of Camp of the Plague. The quarantine regulations in the interior of the city were also bad; each house was shut up, and the inhabitants, after being provisioned with meat and bread, were left to their fate. This system was persevered in till a mortality of 300 a day proved its futility. Another capital fault was, that the military cordon was too weak; no trenches were dug round the

city, as in the case of Noya, where their utility was so apparent. The plague which raged in Toulon was not of a more malignant character than that of Noya. We have only then to compare the number of deaths in the two, to show the importance of a strict medical police.

In 1707, during the Turkish war, the plague was brought by some Jews to Cracow, whence, after destroying 18,000 individuals, it spread to Poland; and in 1708, reached Silesia and Thorn; in 1709, Dantzig and Königsberg; and in the following year appeared in Sweden and Denmark. From thence, in 1713, spread to Holstein and Hamburg, till it was stopped in its career of desolation by the north sea, not, however, before it had reached the confines of Austria, spreading in that direction probably from Posen.

The extent and duration of this plague gave rise to many improvements in the German quarantine laws. New regulations, which were, in general, judicious and appropriate, were formed on the confines of the different kingdoms, and in the towns of Vienna, Warsaw, Copenhagen, Königsberg, &c. Fumigations (which, however, became more general in the Ukraine plague of 1738—39; in that of Transylvania 1755—57, and in that of Moscow, 1770,) were also employed. They consisted of gunpowder, sulphur, and saltpetre, aromatics, &c. which were used in the hospitals and streets.

But the inefficiency of all these measures was but too well proved by the vast extent of ground which this disease traversed in the period of six years. Indeed, although we have spoken with approbation of the measures to which this plague gave rise, the public ordinances on this subject, which are preserved (in the Polish and German language), are not much superior to the decrees and proclamations which were issued in different parts of Germany as early as the sixteenth century, when the plague was raging in 1520, and the following year; in 1534, and in 1554. Some of these are really distinguished for great perspicuity and judgment in the means which they recommend to separate the healthy from the infected.

In tracing the history of those invasions of the plague which have been distinguished by the greatest mortality, our attention is directed to that of Transylvania in the years 1756-57, described by Chenot, and again in the year 1786, described by Lange; to the plague which spread from Moldavia to a great part of Russia, particularly in Moscow in the years 1770 and 1771, and described by Samoilowitz, Shaffonsky, Von Asch, Von Mertens, and Orraeus; that of the Ukraine in the year 1738-39, of which Schreiber has

given an account; again occurring in 1780 (Möller), and again in 1792 and 1798 (v. Minderer); and the plague of Smyrna in 1795-96 (v. Schraud). In successively viewing the legislative enactments to which these gave rise, it is consolatory to observe the improvements introduced, and the benefits derived. The precautions taken by the Austrian Government are entitled to our unqualified praise; indeed, in whatever relates to medical police, Austria is superior to every other nation. The degree of perfection to which the quarantine laws in Austria are brought (and they were already considered excellent in the time of Joseph II.), has been lately instanced in the stop put, within two months, to the plague which spread in 1816 from Bosnia to Sclavonia and Croatia, and threatened the empire of Austria.

The improvements in the quarantine regulations of late years have been so great that we might consider Italy and the adjoining part of Europe as totally secured from the plague, did not the extensive smuggling on the coast of Italy set all precautions at defiance. Of this also Malta, the coasts of Malaga, Cadiz, and other Spanish seaports, within these few years, and lately the unfortunate Noya, afford but too frequent examples. But the best precautionary measures will fail to produce security and health, while they are not extended to the countries from which the plague is imported. While no means are adopted in Turkey, in Natolia, in Syria, in Egypt, and in the piratical States of Barbary, for the suppression of the plague, for preventing its communication to goods, and the exportation of these goods to other countries, so long must we dread it, and so long must we guard our shores with vigilance and jealousy against it. It was lately mentioned in the public papers, that an Algerine corsair with the plague on board was cruizing in the Mediterranean, and had

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* Among the most antient and remarkable German ordinances on the subject of the plague, are those issued at Memmingen, by Baldinus, in 1494; at Leipzig, by Albinus, 1484; another at the same place, by Pistor, 1501; by Hundt, 1519, by Stroemer, in 1516. At Nürnberg, by Kolbenschlag, 1519; another at the same town, by Stocker, 1520; also by Fettich, 1531. The R. St. Nürnberg ordinance on the plague, 1562. A Hesse Cassel decree in 1513; one from Basle, by Vadiani, in 1519. At Augsburg, by Nigri, 1521; and one at Vienna, by Kansstetter, 1521. The Vienna infectious decree of 1540, 1552; that of Breslau, in 1553; of Ratisbon, in 1533. The Hamburgh Pest ordinance of 1578, is peculiarly deserving of attention. The oldest, however, of all the German decrees and ordinances on this subject, is one published at Ulm, by a Dr. Steinhövel, 1473—4, provided Plouquet is correct in the date. Among the French writers on the plague, of the sixteenth century, there is also a Bonaparte.

attempted to land its crew at different places. This fact was detailed with all the feelings of indignation and horror it was calculated to excite, as an unheard of outrage against humanity, and it was supposed to be an act of revenge for the punishment which had been so lately inflicted on them. Yet to such danger have the Sicilian and Sardinian coasts been long exposed. The constant attacks of the corsairs on the defenceless villages of these countries were not more dreadful for the acts of violence committed on the unfortunate inhabitants, than for the danger of infection to which they exposed the whole country.

While, therefore, we consider the strict enforcement of the quarantine regulations as indispensable to the safety of Europe, we are not sanguine enough to hope that they will ensure it. It would only be by energetic measures on the part of the eastern governments that this object could be effected. The fulfilment of such wishes is, we fear, impossible, while these interesting countries are governed by Sultans, by Pachas, and by Deys, and while blind fatality is allowed to supersede the dictates of prudence. We are not sufficiently acquainted with the political relations of England with these lands, to state how far her influence might promote an object so interesting to the cause of humanity; but as we do appear to have some interests in common, as we occasionally surrender Christian towns to Turkish infidels, might we not in return stipulate for some precautionary measures, which, while they would benefit the Turks, would relieve Europe from anxiety.

Should the day, however, arrive when these rich and beautiful countries shall be rescued from the hands of their Tartar and Arabian invaders—then; when they exchange despotism for liberty, error for truth, and sloth and supineness for the enlightened regulations of civilized Europe—then, and then only, can we hope for perfect security against the plague, and for the removal of all restraints on trade.

ART. II. *Operation de Rhinoplastique par Professor Buenger de Marbourg, avec quelques Observations par Dr. Gosse.*

(Communicated by L. A. Gosse of Geneva.)

N. N. aged 32, of a fair and delicate complexion, enjoyed a good state of health till her fifteenth year, when some derangement of the catamenia took place. About this period an eruption of small vesicles appeared on the left part of the upper lip, which the patient broke at different times. An herpetic erup-

tion soon followed, which disappeared, and suddenly attacked the *alæ nasi*. The patient still continuing to irritate the parts with her fingers, the disease assumed a phagedenic character. Several physicians were consulted, and one considering the disease as carcinomatous, applied the arsenical powder of Frère Cosme, which destroyed the whole of the cartilages of the anterior part of the nose. In the mean time the disease extended to the cheeks, especially the left, without, however, being attended with any pain. In this state she was placed under the care of Dr. Buenger, who pursued a different plan of treatment. By a cooling regimen, antimonials, and a decoction of dulcamara, avoiding all external and internal irritants, he succeeded in curing the sores on the cheeks, as well as those of the nose. The epidermis still remained red, tender, and very delicate, breaking from time to time, according to the state of the weather, the winter season being the worst.

The deformity produced by the disease being so hideous, and the skin shewing no tendency to resume its natural condition, Dr. Buenger on the 24th of April, 1818, removed, by means of a cutting instrument, about an inch and a half of diseased skin from the right cheek, with a view to ascertain the state of the constitution. The wound was brought together by three sutures, and complete union took place at the end of the third day, the cicatrix consolidating, and rapidly disappearing. Encouaged by this trial, Dr. Buenger, in fifteen days afterwards, operated on the left cheek where the skin was diseased to the extent of a crown-piece. The cure was equally speedy, but the cicatrix remained rather prominent.

In about a month after this he undertook the cure of the nose, and wishing to obviate all deformity, he resolved to replace the skin of the nose by a portion of that of the thigh. With this intention he began to separate the whole of the diseased skin which covered the nose, taking care to preserve the periosteum of the bones of the *ossa nasi*. The wound was left exposed, and bled for four hours. He then cut an oval portion of skin from the outer part of the thigh, measuring three inches. He placed this morsel on his hand, removed a certain quantity of fat, and with a pair of scissars modelled it into a convenient form: this skin, while exposed to the air for a quarter of an hour, became white, cold, and shrunk considerably. The bleeding from the nose having ceased, Dr. Buenger applied the portion of detached skin to the wounded place, and secured it by eight sutures. Over these he applied adhesive straps, and a bandage to support the whole. The patient was placed on a proper diet, and desired to cover the nose frequently with her

hands, with a view to warm the parts with her breath. At the end of three days he removed the dressings. The middle portion of the grafted skin had assumed a reddish colour, but the edges near the sutures were purple and gangrenous. She was ordered to apply warm fomentations. The space between the sutures suppurated, but the lower part separated in a state of mortification. The cicatrization of the upper part advanced quickly. When examined on the 11th of April, 1819, it presented the following appearances. The skin which covered the bones was fine, shining, tender, and whitish; above and behind, it was united with the integuments of the face; at the inferior part it was a little deficient under the bones of the nose, and curved inwards, particularly on the right side, where it almost entirely formed the nostril. The cicatrices extended from the middle of the dorsum of the nose to the base of the alæ, and resembled those which are produced by burns. The inferior septum of the *alæ* exists in part, and the interior of the nostrils is apparently sound. The upper lip is still the seat of slight morbid irritation, but in other respects the patient is quite well.

Dr. Buenger now proposes to form the extremity of the nose at the expense of the arm, after the manner of Taliacotius; and intends to remove the diseased part of the upper lip by the bistoury.

Observations by Dr. Gosse.

The case of N. N. affords an example of those diseases which are at first local in their nature, but by an empirical mode of treatment assume an appearance different from that which they had at the commencement, and terminate in the production of a constitutional affection. The disease of this woman made its first appearance as a case of simple *herpes labialis*, the effect perhaps of some local irritation rather than of any constitutional derangement. Left to itself, or by the aid of an antiphlogistic regimen, this affection usually disappears in a few days. Not so, however, when the irritability of the surface is too much excited; by repeated irritations, the functions of the nervous system are changed, and the character of the inflammation is modified; phagedenic ulceration, which is always aggravated by stimulating applications, soon manifests itself; the subjacent textures participate in the irritation, assume a schirrhous appearance, and a true carcinoma, accompanied with vitiated secretions and constitutional symptoms, is at last established. A striking analogy, as regards the consequences here alluded to, exists between this herpetic affection and the *herpes preputialis*, which consists of an eruption of one or more vesicles, disposed in groupes, at-

tended with a sense of burning and itchiness, having its seat in the mucous membrane of the prepuce or glans, whose functions are so easily modified by a local irritation. These vesicles bursting, form slight excoriations, and from mechanical irritation, want of cleanliness, or from the urine acting on the excoriated surface, they are frequently converted into ill conditioned ulcers, which become phagedenic. They are in this state too frequently regarded as the effects of a specific virus, treated accordingly, and followed by constitutional symptoms. Do not many of the affections supposed to be syphilitic owe their origin to such a cause? Does not this fact shew the danger of employing mercury in such a case—a mineral which, although it indirectly exerts an antiphlogistic influence on the system, has a primary irritating effect? This ought to induce practitioners to attend to the primitive symptoms, and prefer the antiphlogistic treatment.

To arrest the progress of phagedenic ulceration of the nose *(Noli me tangere, lupus, &c.)*, the application of the arsenical powder has been recommended; but when we consider that it is impossible to limit the destructive action of this application, and the consequent danger to which the cartilages are exposed, we shall be inclined to deem the recommendation of the knife more judicious. I know it has been proposed to supersede both these operations by a local treatment of an antiphlogistic and soothing nature, and general tonics, particularly where organic alteration has not taken place to any considerable extent. It is in cases of this kind, I presume, that the flesh of green lizards eaten raw and quivering, after the fashion of some American tribes, has proved beneficial. A case of this sort I witnessed myself, in which the cure was to be attributed to the salutary vital action which resulted from the administration of the above article.

With regard to the operations performed by Dr. Buenger for remedying the deformity of his resolute patient, we see that the extirpation of the disorganized skin of the cheeks was the best means of preventing a relapse, and ascertaining the state of organization before proceeding to the treatment of the nose. The precaution of leaving the wound of the nose exposed to the air, and even waiting a considerable time until the hemorrhage ceased, is founded on the fact that re-union takes place much more easily when this rule is observed than when the lips of the wound are too soon brought together. This precept is taught in the medical school of Vienna, and applies to all operations by the knife, in which we wish union by the first intention. When we close the wound too speedily, before the bleeding from the

smaller vessels has been stopped, the blood which is interposed between the two surfaces has no tendency to become organized, and suppuration is promoted; whereas, exposure to the air, and the application of a liquid of a low temperature gives rise to an exudation of lymph, which is necessary for the adhesion of the parts. This practice is further deserving of adoption, as it obviates the necessity of multiplying ligatures, and thereby greatly diminishes the sufferings of the patient. Mr. Carpue informed me that he had occasion to verify this observation in the operations which he performed upon the nose.

The question of *animal ingrafting* has much engaged the attention of modern physiologists and pathologists. Although the labours of Taliacotius had placed beyond a doubt the possibility of transposing living parts when a particular management was observed; and notwithstanding the accounts given by Garengeot and others, it has been denied even in these times, particularly in France, that a part entirely separated from the body is capable of re-acquiring vitality. The thing is now, however, proved by the most authentic facts. An Italian has transplanted and ingrafted portions of skin from one animal to another, and Dr. Buenger has here demonstrated that the same phenomenon may be effected in the human species.

The circumstances which appear the most singular in this case, are the changes which took place in the insulated skin, the unfavourable appearance which it assumed, and the length of time which elapsed from the moment of its separation to that when it was applied, with the course which it followed in its reunion, and the modification of structure which it underwent in its progress. Vitality and circulation were first established in that part which was in contact with the periosteum of the bones of the nose, while the edges and extreme portions fell into a state of mortification. The sutures evidently favoured this disposition to gangrene, and the simple adhesive straps would have been preferable. It may be also observed, that the care which Dr. Buenger took to expose the parts which had been operated upon to the influence of the warm breath, in no small degree contributed to the success of the operation; particularly if we look upon the breath not merely as a simple aqueous vapour, with the addition of caloric and carbonic acid, but as partaking of the vitality of the organs which excreted it, and containing principles eminently animalized.

ART. III. *Comparative View of the Foreign and British Schools for the Deaf and Dumb.*

(CONTINUED FROM VOL. I. NO. III. P. 335.)

GENOA.

THE next school in our route was that of Genoa, which has been established about six years. The master's name is Ottavio Giovanni Batista Assarotti, an aged ecclesiastic, who went to Bourdeaux many years since, by the direction, and at the expence of the former independent Genoese Government, to study under the masters of the Royal Institution above described, the mode of teaching the Deaf and Dumb, and was on his return appointed to the direction of the newly formed school. The present masters of Genoa, the Sardinian Government, have continued to support the establishment over which he still presides.

The Institution is situated in the suburbs of the city, without the interior range of fortifications, at a small distance from the principal public promenade, and has some grounds attached to it for purposes of exercise and pleasure.

The plan of instruction here pursued is, as might be expected, very similar to that followed at Bourdeaux; except that the master did not seem to dwell so long on teaching mere isolated words in a classified vocabulary—a defect which has been noticed above as observable in the Institution of that city. In this he has certainly improved upon his master's plan, but in the progress of his scholars, he did not seem to us to have excelled, scarcely to have equalled him. He commences almost immediately on the scholar's arrival with interrogative sentences, at first teaching the pupil the whole of the answers which he should give as well as the questions, and afterwards gradually leaving the formation of the former to the pupil's own unaided efforts. He has thus constructed a series of exercises in questions, a copy of which we afterwards saw with a pupil of his at Milan, but which has never been printed, and of which we could not succeed in procuring a manuscript copy, from the short residence in that city, which our other more immediate objects in travelling, allowed. We examined them, however, sufficiently to see their general arrangement, and the principles upon which they were planned and executed. There were certainly many serious defects; for instance, some of the very first questions in the book related to matters about which, even if the Deaf and Dumb perfectly understood the terms of the question, they could not in this stage of their in-

struction give any answers whatever, even in signs, without the aid of their teacher. Some of them, for example, concerned the world, and the succession of creation, nature, the deity, the soul, &c. subjects which have never yet entered the mind of the pupil, uneducated as he is supposed to be on arriving at school, and about which he can never, by any possibility, think rationally, until somewhat instructed, through the medium either of methodical signs or words. Hence arose the necessity of at first putting not merely the words of the question, and also of the answer into his hands, but of communicating to his mind, at the same time, the very ideas for which these words stand.

Indeed, this mode of commencing by questions, before the child has made any progress in the knowledge of the interior of language, though it may have some advantages, if pursued hereafter in the manner suggested, has, if conducted on Assarotti's plan, this obvious defect, that it obliges the master to give the answer himself as well as the question; so that the mind of the pupil is merely recipient, and not at the same time productive; his memory alone is employed, while his judgment and imagination may be inactive or asleep. If, therefore, the master did begin by questions expressed in sentences composed of words, as we are convinced he might, the very first day of his pupil's arrival at school, it appears to us evident, that he should make his first interrogations, not merely of such a simple nature that they can be easily explained by signs already invented by the pupil, or adopted from the master, so as to be perfectly and at once comprehensible; but that they should also relate to such subjects as the Deaf and Dumb have already learned and made matters of reflection, even before the commencement of their verbal education. Thus their own unassisted resources will be sufficient to supply the requisite answer which they should be allowed to give in their own way, that is, in signs. To translate his reply thus gesturally enunciated into our verbal answer, and to make him understand the latter by shewing him that it means precisely the same that he had expressed by his significant gestures, is a matter of the utmost facility, and may be executed with any deaf and dumb child of ordinary capacity, on his first arrival, supposing him to be five and a half or six years of age. Thus, indeed, his mind will be active in aiding his instructor, and his native stores of information, as well as his reflection, will be exercised; he will feel his own powers, and the necessity of their employment. His mind will be the passive receptacle of instruction, only in so far as it

is impossible that without our aid he should ever be instructed by his own observations upon himself, or on eternal nature; we mean in the arbitrary appropriation of certain combinations of letters into words, to certain ideas.

This mode would also bring the education of the deaf and dumb pupil still nearer to that of ordinary children, a matter we conceive of the greatest importance, from the light which each may be made to throw upon the other, as well as from the prospect which it holds out to the parents of the deaf and dumb, of being enabled in time to prosecute their education at home, with effect and ease. Every one must have remarked that ordinary children have by signs of assent or dissent, of being displeased or pleased, of consent or of refusal, of entreaty or of remonstrance, &c. &c. expressed a rational answer (indicative of a voluntary exertion of their own minds) to their mother's questions, enounced likewise in actions, long before they know any words, and will in the same way, soon after answer questions expressed in words, long before they are capable of saying either yes or no, much less of framing any long or detailed answer to their interrogations.

Thus, suppose we wished to ask a deaf and dumb child on his coming to school, the question, "This is, what?" shewing him at the same time a knife, and using the signs of demonstration and interrogation implied in this question, he would immediately answer by the sign of cutting, which with him stands both for the common mode of using the article and for the article itself. We should then write this question, and shew him that it and our signs were perfectly equivalent. The word "is" is omitted in the signs, because the deaf and dumb have naturally no sign to express it, or indeed, we might say, any part of the verb to be in such phrases as this, and also because it is in reality, as said before, a mere word, (verbum) having no relative idea in the mind. Suppose again, we ask him in the same way, "Is this hat black?" we point out the hat, and having found out the sign which he used for black, which will probably be the passing of his hands backwards and forwards before his eyes, so as to intercept the light, we use that sign and express the interrogative state of our minds by an enquiring countenance, he will immediately nod either assent or denial as may be the truth. We then shew him that the verbal sentence means exactly the same as our gestural question, that "this" means, *indicating with the finger*, an object that it touches or can touch. "Hat," the real hat before him, and of course also his sign for that object; "black" his sign

for that adjective, and the interrogative mark " ?" an enquiring countenance or manner. In this way we write and explain the various answers that may be given to this question.

1.—It is black.
2.—It is not black.
3.—It is white, &c.
4.—It is.
5.—Yes.
6.—No.
&c. &c. &c.

And shew him that they all correspond in their parts to his signs, and to our verbal questions, putting numbers over the words, thus:—

1 2 4 3 5
Hat this is black ?
1,2 4,5 3
1.—It is black.
1,2 4 5 3
2.—It is not black.
1,2 4,5 3
3.—It is white.
1,2 3 4.5
4.—It is.
5. 1,2,3,4
5.—Yes.
5, 1,2,3,4
6.—No.

A very little ingenuity in varying questions of this kind will soon enable the pupils in their turn to ask about an object. " What is this ?" " Is it black," round, &c. &c. which is of great consequence, as it will enable every ordinary bystander to contribute his share towards their instruction, in these merely nomenclatural parts of education, the vocabularies of nouns, adjectives and verbs, which, though in fact the least important, occupy much the largest portion of his time at school. Thus the efforts of the regular master and of the pupil while in school will be directed to the really essential part of his education, increasing practice in the exercises in the grammatical genius of our verbal language, and the correspondent or disagreement of its respective parts from the similar parts of the language he already possesses.

A little of the same ingenuity would enable the teacher in a very few days to add a vast variety of questions, introducing successively the interrogative pronouns and adverbs, and in the answers, the corresponding responsives, whether they be pronouns or adverbs or (which are the same as adverbs) prepositions. Of both these classes we shall give here a short list,

sufficient, however, to explain our meaning, and to shew the reader what an extensive assortment of words may be thus introduced at a very early stage of his instruction :—

Who? What? Which? Where? Wherein? Whereon? Whence? Whether? When? How long? How long ago? How oft? How many? How much? What kind? How? In what manner? Whereby? By what means? Why? Wherefore? How so? Why not? Whether? Is it so? Is't so? I'st not so?

Thus an opportunity will be given of introducing in the answers all the varieties of the articles and pronouns, the adverbs and prepositions, and eventually the conjunctions; in fact, we may say all the particular words, the use of which can be easily learned from constant repetition, and should therefore be introduced as early as possible to the notice of the deaf and dumb. Nouns, adjectives and verbs, with their declensions and conjugations, &c. and the conjunctions, should be introduced just as they are found necessary to afford a variety of illustrations to these particles, which are the most important words to the deaf and dumb, because less easily supplied by signs than the nouns, adjectives and verbs, and interjections, which have almost all a perfect correspondence with the gestural or physiognomial signs of their own language, and may be easily learnt afterwards, either from any person with whom they have intercourse, or in a regular series of exercises, or distinct vocabularies of nouns, adjectives and verbs. This, however, is deviating from our more immediate object, the Genoese school, and the plan pursued in it, and anticipating part of the general views of the method to be pursued, which was intended for the close of the paper. We find it impossible, however, to avoid these occasional digressions, growing out of the subject before us, and shall therefore frequently engraft the observations we have to make upon the accounts of individual schools.

The school apparatus in this institution is very simple and well contrived; almost the whole of one side of the room was covered with a very large smooth wooden tablet painted black with red lines drawn across it from side to side, on which the children write with long square pieces of chalk. A couple of steps led up to this stand placed so that pupils of different heights could with facility write on it, without either much stooping or stretching. On one of the steps stood the boy who was immediately in exercise; the master, with the other pupils around him, stood before the tablet on the floor. Thus all could see the signs of the master and the writings of the pupil. A few books were lying about the room, among which we noticed none expressly written for the deaf and dumb.

There were French and Italian Dictionaries; a Biographical and Classical Dictionary; a book of Synonymes, an Encyclopedia, and a history of the Bible, with numerous fine engravings. The children wrote principally on the board, but they also use paper very much, as they all copy the book of questions or history, grammar, mythology, arithmetic, religion, &c. mentioned above, or written for them by the master. The scholars in this school are never taught to articulate. Indeed, this is the case, we believe, in all the Italian as well as the French schools; in the German, Swiss, and English Institutions, the reverse is the case.

The number of boys is about twenty-seven, and of girls, we believe about twelve. They all seem very well instructed in the meaning of language, and are divided into three classes, of which one is composed of pupils paid for by their parents, another of those supported by Government. The remainder are educated gratuitously by the master, and many of these are taught trades.

The master offered to give us several proofs of the progress of the pupils. He dictated a difficult sum in arithmetic to the senior boy, who immediately wrote it down; he then folded his arms, and marched up and down the floor before the tablet, with his hand on his forehead, in a thoughtful manner, searching in his mind for the solution of the question, which in a few seconds he discovered, and wrote down accordingly. This had too much of theatrical display to please any lover of simplicity; but much must be allowed for Italian manners, especially on such a subject as the deaf and dumb.

The Abbé then asked our names; we gave our surnames. He made a set of signs to the pupil, speaking at the same time, to enable us to understand his meaning, as most of his signs were purely conventional, and therefore unintelligible to strangers. The pupil wrote down our names. The master had a singular way of making him effect this, which at first sight must astonish a stranger very much by the display of erudition sacred and prophane, historical and mythological, &c. &c. which it exhibits. For instance, if the foreigner's name begins with R, he would say, take the second letter of the name of the celebrated musician and bard, who, by the powers of harmony, attracted the beasts and birds and trees and fishes, and even rocks around him. This was, of course, Orpheus. The pupil wrote R. For each of the other letters of the stranger's surname he took a letter from some celebrated name, until, at last, the word was complete. It must very much astonish ordinary visitors, who are by no means English lords, even by courtesy,

to see themselves thus unexpectedly raised to the honor of an alliance with all the celebrated characters of antiquity and fiction, and to find that Mars, Bacchus, Apollo, are obliged to become tributaries to enhance the lustre of their names, and complete their full glory. To us, however, we confess it shewed nothing but a mere useless act of memory, cultivated and exercised, we much fear, for the purposes of display more than of real utility.

We therefore turned away from this part of the exhibition displeased, or at least dissatisfied; and requested leave to ask some of the pupils a few questions, which was immediately granted. Pointing to a book of mythology, we asked one of the younger boys, "Is this history true?" No. "Where is the true history found?" In the sacred history? "Who wrote the sacred history?" "Noah," he wrote; but another, a little older than him, wrote "Moses." Another boy was asked, How many years old are you? "Eleven years." What is this called? "A pen." Have you read the sacred history? "Yes, Monday (he meant on Monday last)." Another wrote, "Adam was the first man." "Who was his wife?" "Eve." I do not understand Italian well, because I am an—— Of what country are you? "Of Genoa." What length of time have you been in this school? "About two years." Write something for me: the boy wrote, "This watch that you have, for how many livres did you buy it?" We wrote the price. The boy added, "You are Catholics?" No; we are Protestants. Do you know what Protestant "means?" No, said the child; adding, "You know how to write Genoese, French, and English." He then gave us some questions in multiplication and division to answer. Having done so for him, he said, "You know how to add, subtract, multiply, divide, and algebra." "A little." "You pretend so, but you know much: you are humble and inquisitive." He afterwards asked us, "Have you received baptism?" "Yes, certainly." The boy wrote, "You are joking." "No, indeed; why do you think so?" "To see if you are true." What does true mean? I do not know, said he; but another added, "it means the conformity of our idea to the object." "Why then do you think we have not been baptized?" "Because you are Protestants." The assistant master, a young ecclesiastic, we believe of the order of the Jesuits, wrote down for the pupil,— "These gentlemen speak truth when they say they have been baptized, for Protestants do also baptize; but you too had reason when you said they had not been baptized, because baptism not conferred according to the rites of the Catholic Church is of no avail."

Leghorn.—There is a school for the deaf and dumb at Leghorn, derived from that at Genoa, as the latter was from the one of Bourdeaux; but as this city did not lay in our route, we cannot give any details respecting it. The plan of instruction is the same in both.

Florence.—We should think that by this time a school has been established here; for while walking one day in the Grand Florentine Gallery, we met several young boys with oil-skin tablets on their backs and shoulders, on which was painted, "Sordi-muti." An ecclesiastic accompanied them, and on inquiry we found that they were a few of the Genoese pupils, who had been brought to Florence in order to interest the public, by the exhibition of their attainments, with the hope of their forming there also a seminary for their instruction. Considerable success had already attended this effort in their cause, and there was every prospect that the Government of the Grand Duke and the public would patronize the projected establishment.

Rome.—Formerly there was a school here for the deaf and dumb, kept by the Abbe Sylvestré, a pupil of the celebrated De L'Epeé, but it is no longer in existence. There is now a small private school consisting of four or five pupils. We met one day in the street a poor deaf and dumb man, who had been a pupil in the former school, but he did not appear to have been well instructed, or else he had forgotten much of what he had been taught,—a circumstance of which all the teachers of the deaf and dumb complain, but which arises in fact from their own defective mode of instruction; wasting time upon many useless matters for the sake of shew, and not teaching whatever is indispensable in a radical manner. We, perhaps, hardly ever forget what we have fully learned and comprehended; never, probably, when it is a matter of daily use, and called into requisition by every ordinary intercourse of society.

Naples.—There is in this capital a large establishment for the deaf and dumb, under Signor Berredetto. His vacation, however, unhappily occurred during our stay in Naples, and the pupils were all absent with their friends. The master also resided at some distance, south of Naples, and could not therefore be visited. However, as he also was a pupil of old Assarotti, the Genoese master, we should probably have seen the same plan pursued as in his school.

Milan.—A school has been lately opened in this city, which contained in 1818 about ten boys and as many girls, under the Abbe Carlo De Bonis, likewise a pupil of Assarotti. The plan pursued seems to be almost precisely the same as at the Genoese Institution. The arrangements of the school-room are similar.

The master also seemed to us one of the most amiable men we had met, connected with any of the institutions, and as well as his pupils seemed gratified by the accounts we gave them of the institutions of a similar kind in this country; and the latter seemed to rejoice to learn, that their brethren in misfortune were attended to in other countries as well as in theirs. One of the pupils presented us with copies of the manual alphabet, on a large sheet, engraved by himself, with a request that we would present them in his name to some of the British Institutions. It is freely drawn and well engraved. The manual alphabet used throughout the Italian schools is that usually called the French, but is in fact borrowed from the Spanish.

The master and all the pupils bade us farewell with the truest kindness and affection, the latter kissed our hands in the Italian manner of valediction. We needed not this to teach us that the deaf and dumb possess the warmest affections possible. They said they hoped to see us again, but we answered this could never be in this world, yet hoped to meet once more at the final judgment, and that that great day should be the renewal of our acquaintance that was but temporary, and of a friendship that was soon severed.

The master was perfectly unreserved and open, communicating to us every information in his power that we solicited. He gave us the names of several German works on the subject of the education of the deaf and dumb, which we have since in a great measure procured, and of which we shall hereafter give a catalogue. He shewed us also in manuscript, a translation of one of these into Italian, made by a friend for his use, and said that no work on this subject had ever been published in Italian.

We were much pleased with the manner in which he seized every passing occurrence to make it promote their instruction, and turned their feelings and curiosity at the moment to account in their education. He took advantage of every incident about which they seemed interested, to make it a vehicle of instruction. This is certainly the true method of education, for children always learn more easily what most interests them. It is also in the true spirit of Pestalozzi's principles.

Italian is the only language taught in this school. All the pupils of the lower class learn trades. There is a garden connected with the establishment.

Veroha.—Whether the school for the relief of the deaf and dumb, projected by the celebrated Venturi, was formed in this city or not we are unable to say, but when we were passing through it we were not informed that there ever had been an institution of the kind contemplated here.

Yverdun.—At Yverdun in the Pays de Vaud (Switzerland), about two hundred yards from the celebrated institution of Pestalozzi, there is a small private school for deaf and dumb children of the higher classes. It is under the superintendance of M. Conrad Naef, a native of Zurich, where Pestalozzi likewise was born. M. Naef quitted that city seven or eight years since, and established himself at Yverdun, as a teacher of the deaf and dumb, having received an advantageous offer to undertake the instruction of a young boy labouring under this melancholy deficiency. Previously he had been, for several years, employed as an assistant in this branch of education by the respectable M. Ulrich of Zurich, now President of the District Tribunal, and Member of the Council of Education, whose attention was called to the subject in consequence of his having a relative born deaf. M. Naef's devotion to the cause of the deaf and dumb in his native country, and indeed his love of the profession to which he had now determined to consecrate his life, were feelings naturally inspired by the lessons and example of such a master; one who was every way worthy of being the pupil and friend of De L'Epeé. Previous to his undertaking the intended plan which he had contemplated for the benefit of his neglected fellow-creatures and compatriots, M. Naef was induced to go and reside some time near the chateau of Pestalozzi, where the most valuable information was to be obtained on all subjects connected with education. He has published a short prospectus of his plan, and a history of its progress, from which we cannot forbear making some extracts, as they contain many just observations on the condition of the deaf and dumb, and the means of relieving them.

"I determined," says he, "the more readily upon this step, because I had now for a long time been desirous to acquaint myself with, and, as far as possible, make use of every thing in the ideas, the principles, and the practice pursued by Pestalozzi in general education, that might appear susceptible of an easy application to the treatment of deaf and dumb pupils; and I had every reason to congratulate myself upon the relations in which I was placed, both as to my pupil and to the masters in the institute of Pestalozzi. At the end of a few years I had conducted the education of my pupil to such a height, that he was able to make his profession of faith as a Christian, and to be admitted into a Christian society in a public solemnity, in the presence of a numerous assembly, who were exceedingly affected by this ceremony: and as to the application of the method of Pestalozzi to the education of the deaf and dumb, satisfactory and repeated experiments have convinced me, that

it offers for this special branch of education assistance and advantages, as essential as for that of ordinary children. It was not long before I found opportunities of extending the sphere of my activity and of my experiments. The happy success which had crowned my first efforts soon engaged many families, both in this canton and in France, to confide their sons to my tuition; and thus it has happened, that all at once, and almost without my participation, a foundation was laid of a small institution for the deaf and dumb.

"The worthy M. Hermon Kruise, one of Pestalozzi's earliest friends and fellow-labourers, admitted me with affection into his family; and I enjoyed a perfect satisfaction in the accomplishment of my duties, now become doubly dear to my heart, which I performed in silence and seclusion, as well in my efforts to perfect my views, and augment my experience. To give, however, a general view of the organization of my establishment, and of the fundamental principles on which it is conducted, would lead me into details inconsistent with the nature of a prospectus. I shall one day I hope be able to give publicity to a circumstantial and satisfactory exposé of my views and experience, as well as of the institution to which they now serve as a base. In the mean time a few hints must suffice. The deaf and dumb ought, according to my judgment, to be treated exactly upon the same principles as those upon which is founded the cultivation of man in general. He is no less susceptible than every other human being whose mind is perfectly organized of undergoing the true educatory process, that is to say, of acquiring a developement of mind and of sentiment which shall be perfectly free, and which shall emanate, as it were, from the most interior sanctuary of the nature of man. His education should only differ from that of ordinary children in the means which the imperfection of his physical organization renders indispensably necessary.

"Those persons appear to me to have a manner of viewing the subject that equally dishonours the science, whose object is the culture of the deaf and dumb, and human nature itself, who, because of the deficiency, certainly accidental, of one sense, and of the impossibility thence resulting to make use of ordinary speech, consider the deaf and dumb as beings unsusceptible of a developement of reason like other individuals of the same species, although, with this exception, organized in a manner as complete; and who fancy besides, that, though indeed incapable of any thing deserving the name of education, they may be drilled with much pains, so as to be at least led, in relation to intellect, to certain mechanical facul-

ties; and in relation to moral existence, to imitative habits, or perhaps only to an exterior polish, which will hinder them from doing injury to their species, in consequence of their privation of reason.

"To think thus is to degrade humanity, and blaspheme the moral and rational soul of man. The deaf and dumb should above all others, and in every point of view, be considered and cultivated as a reasonable creature, in whom, as well as in every other individual of his species, should be developed and manifested the rational and spiritual life, that emanation of the divinity. It is not until he becomes a man, in all the extent of that word, and such he can and should be, that he will be a good citizen and an useful and estimable member of society in every relation in which he may be placed. As the external world and all that surrounds him will necessarily act on him in an imperfect manner, it is natural that positive instruction should have more concern in this developement in him than in ordinary children; yet this does not at all authorize us to deny that he can and ought to receive this instruction, by means of a veritable *education*, in the true sense of that word, by a real culture of his innate faculties and capacities, and not merely by mechanical impressions, which can do no more than drill him to our purposes. Conducted by these ideas, to which I can here only allude in a general manner, but which are capable of a much more extensive illustration, I seek constantly and above all things, with my pupils, to act upon the most noble part of their nature as men—I mean their affections. An affectionate treatment, which extends itself to every thing, embracing all the minute detail of the attentions which they require, will kindle in them the sacred flame of love for me, and all that surrounds them, will excite in them the sentiments of gratitude and of confidence. The poor deaf mute who has so much difficulty in making himself understood, and in understanding others, has so much need of being loved, and is, indeed, so worthy of it! It is so easy to do him injustice, to wound his feelings by a misconception of his meaning, to hurt his sensibility by a neglect of his affection. Let no man, therefore, ever think of undertaking their education, who does not feel continually in his bosom an unalterable respect for what still remains of noble and of great in the fallen nature of man, with a love pure and capable of the greatest sacrifices for his fellow; for it is by this means alone, by an unchangeable love that makes itself felt every hour, and in every relation of life, that it becomes possible to mature the moral nature of the deaf and dumb. It is thus alone that we can hope to elevate their souls

to religion, since it is impossible for them to obtain any notion except by immediate instruction."

The spirit of these observations is of so just and disinterested a character, and the feelings they express so important, that we could not forbear extracting them for the benefit of the instructors of the deaf and dumb in our native country.

Some interesting observations respecting this school, and more especially its first pupil before mentioned, were published in a French work, entitled " Esprit de la Methode d'Education de Pestalozzi, suivie et pratiquée dans l'Institut d'Education d'Yverdun en Suisse. Par Marche Antonie Jullien, &c. Milan, 1812." But though it contains some important facts, its value is much diminished by the mistakes and misconceptions with which it abounds, and the impossibility of comprehending the author's meaning in many parts, from the verbose style in which they are written. We shall therefore only extract what seems interesting, and what we ourselves know to be true.

We were present at one of the exercises of Louis Charles, the boy above alluded to, at that time 16 years old, to whom M. Naef had devoted regularly five or six hours a day for one year. His instructor appears to have brought to this difficult species of education, unalterable patience and gentleness, combined with great sagacity and observation. He is therefore much beloved by his pupil, who feels that he has derived from him the inestimable blessing of a new existence. M. Naef conceives that two years more will suffice to make his education nearly complete. Young Charles is lively, good-humoured, quick and intelligent. The expression of his physiognomy and of his gestures is very remarkable, and always perfectly analagous to the things he wishes to depict. He always assumes a grateful look accompanied by a smile, when conversation relates to females, or the female sex in general. He has signs and gestures equally expressive to designate the qualities which correspond to the words pretty, little, grand, handsome. He kisses tenderly his hand to express the meaning he attaches to the word love. We wrote upon his tablet, Qu'est-ce que vouloir? He immediately assumed an attitude of desiring and of decision. We next wrote, What is God? He shewed us the expanse and the elevation of heaven, and joined his hands as if to pray. On our asking, What is virtue? He assumed a mild, calm, benevolent look, and proved that he knew virtue to consist in being good and doing good. We wrote down the words, Would you like to die? He immediately wrote down " No," with a natural sign, expressive of repugnance to death and attachment to life. He appears to have much good sense, promptitude of conception,

precision of ideas and memory. He is delighted when he receives any new information, and testifies ingenuously his gratitude to his instructor. He is very much attached to him, and cannot live contentedly at a distance from him. He once said to him, "Oh, remain with me as many days as you have hairs upon your head." He has many ideas which appear to us singular, and which are yet natural enough. He thinks it, for instance, very ridiculous that the word ("barbe") beard, should be of the feminine gender, and be preceded by the article "La," while the object it expresses is a distinctive attribute of the male sex. He does not conceive that we can address the word "you" to a single person, and therefore "thee" and "thou" were the phrases which he wrote in his black tablet.

He has learned to pronounce words, but without being able to modulate the intonations of sound. He remarks the articulation of others, and all the movements of their lips, mouth, &c. &c. necessary to produce the various inflections of the human voice. He knows how to distinguish and depict, by expressive and natural signs, peculiar to the deaf and dumb, the different physical objects which he sees. He names every thing which is presented to him, he knows perfectly the value of the arithmetical characters, and is beginning to perform with intelligence the different operations of calculation. He can read distinctly what is set before him, and writes himself with chalk or crayon on a large black tablet, or on a slate. His writing is clear and neat, like his conceptions. He writes also with a pen and ink, like the other pupils of Pestalozzi's Institute. We saw also his collections of phrases, simple, clear, and expressing true notions, which are all formed by him out of words given to him by his master.

He seized very readily the differences between objects, their names and qualities. If you wrote some substantive nouns upon his slate, with adjectives adjoined, which could not accord with them, as, "a crooked ruler," "a straight scythe," "red snow," "white blood," he would immediately replace the epithets before the words with which they agree, and rub out such as implied a contradiction. He comprehends clearly the nature of the verbs "To be" and "To have," and knows the three radical tenses with all the persons, the genders, degrees of comparison; in a word, all the delicate shades of difference in language are perfectly apprehended, and ingeniously expressed by him. He has begun the study of geography, which amuses and interests him much; he already

knows all the large rivers, principal chains of mountains, large cities and their respective distances, but is particularly fond of studying the map of Switzerland.

We read a little journal written by this interesting pupil, in which is an exact relation of all that he had seen or done during the last six or eight months, and a faithful and lively picture of the impressions he had received from external objects. He continues to write a diary, in which he registers the circumstances of his interior and exterior life, his sensations, thoughts and observations.

During the hours not consecrated to his studies, he takes pleasure in being industriously employed. He works for the house, and renders himself useful to his parents, who keep a little inn. He can go to the vault and bring wines, distinguish their qualities and prices, and sell them to strangers, without ever mistaking the different pieces of money, Swiss or French, which are paid to him. He has a brother twenty-four years of age, deaf and dumb from birth like himself, but lazy and much less intelligent, and a sister whose hearing is perfect.

Young Charles is acquainted with most of the sports and exercises of the other pupils of the Institute. M. Naef profits with great sagacity by the examples of the developement of children (infinitely modified with respect to each other), which the numerous family of Pestalozzi presents; and, at the same time, he furnishes by the account of the progress and career of his own pupil, subjects of experiment and observation, which Pestalozzi and his fellow labourers, always occupied with infancy and humanity, do not allow to escape them, and know how to apply judiciously to their mode of education.

The Institution of M. Naef is situated in the centre of the little town of Yverdun, on the north-west side of the principal street called Rue de la Plaine. It consists of a commodious house, with a long garden running backward to the extensive plain or common, which belongs to the magistracy of the town, and is called Le Derriere du Lac, from its forming the southern boundary of the fine lake of Neufchatel. The number of pupils is but small, not exceeding eight or nine, all boys, one of whom is a grandson of the celebrated Gessner. Some of them evince considerable talents, and the eldest pupil at present there, Constant de Gusriveno, has acquired most of the common branches of education. He speaks the French language very distinctly, and readily guesses, by observing the motion of the lips, a great part of what is said to him; he is able to read most ordinary books, and can express himself well in writing; he has also made some progress in German. He has a sin-

gular talent for drawing, of which he gave us several pleasing proofs. Among others, he presented us with a view of the town of Yverdun, which he had himself sketched, and which is executed with remarkable correctness. On New Year's Day, (1818,) happening to be then at Yverdun, all the boys presented us with a new year's gift, requesting that we would give them to the pupils of any of the British Institutions as a token of their sympathy and affection. This "cadeau" consisted of a series of drawing-exercises, arranged according to the plans and views of Pestalozzi, which they had copied from originals, executed by the pupils of M. Ramsaüer, the drawing master, and in accordance with the principles of drawing adopted in his institution. Several of the other pupils also made us presents of drawings and of little figures of various natural objects, imitated in pasteboard, to assist in studying perspective in a practical manner. As the pupils in this school are, with the exception of one, all from the higher classes of society, they do not learn any trades. They have, however, an extensive garden, which they cultivate; and in which M. Naef is now constructing gymnastic machines, with the view of instructing his pupils in that most important part of physical education. It is singular that this most necessary branch of education, viz. that of our bodies, has never been in the least attended to in this country, where, from the nature of our climate, and the prevalent diseases of adolescence, as well as from the commercial and laborious occupation of almost the whole of our population, it would seem of the utmost value: for what can be more efficacious for counteracting the effects of our ever varying and humid atmosphere, than a strength and muscularity of frame ensured by an unceasing, gradual and universal developement of all the powers of every limb, by suitable exercises adapted to each. And what can be a better preparation for the dangers and hardships of a naval or military life, than the patient endurance, self-command, and surprising agility acquired and ensured by these exercises. We saw a very interesting exhibition at a gymnastic school at Paris, conducted by a Spanish officer of the name of Amoros, where we were astonished at the powers acquired by the children, and the feats performed with the greatest ease by boys of five, six, seven and ten, and for which, from want of practice in childhood, we were utterly incompetent. However, to dwell upon this subject, at present, would lead to a deviation from our plan. We shall recur to it once again, and shall only mention here a circumstance which will scarcely be credited by parents and schoolmasters in this country, viz. that such has

been the result of the attention paid to the education of the body, at the institute of Pestalozzi, that *there has never been a single instance of death* in his institution, and yet between ten or eleven thousand children, Swiss, Germans, Austrians, Prussians, Russians, Courlanders, Danes, &c. French, Spanish, English, Greeks, Armenians, Americans, &c. &c. and of all ages, ranks, and constitutions, have passed through his school. This fact, extraordinary as it may appear, has been confirmed by Pestalozzi himself, by his masters, and by many of the most respectable and impartial inhabitants of Yverdun. Such a statement we may consider as not much calculated to afford satisfaction to the disciples of Mr. Malthus, who go so much farther than their master ever went. Blessed, we think, is the family and country that hath its quiver full of hardy, agile, healthy, industrious children and people. How different are the wholesome, manly exercises pursued at Yverdun, under regular masters, from the miserable unnatural weariness of walking linked two and two along a dusty road in summer, like the pupils of our schools. From such evils may our youth ere long be delivered, by the introduction of useful exercises!

The pupils remain in this school generally about two years, which M. Naef considers a sufficient time to enable children of ordinary capacity to be instructed in the usual branches of education, arithmetic, drawing, language, the commencement of mathematics, &c. so as to fit them for any ordinary occupation to which they may be destined, and enable them to pursue their own education afterwards.

As to his pupils at this moment, they exhibit very different degrees of attainment, having come under his care at different times. All, however, shew an anxious desire to inform themselves, and join in their lessons with a zeal and pleasure often wanting in more favoured individuals. Their activity is exerted to the highest degree, and even in the hours of recreation, they are constantly occupied with something that is useful or agreeable. They make little models in wood or pasteboard, collect plants and minerals, cultivate the garden, or pursue gymnastics. All learn to draw, as it interests and affords them much facility of communication, being so closely connected with this principal source of knowledge.

They are instructed in this art and in perspective, illustrated from real objects, according to the method recommended and adopted by Pestalozzi. M. Naef's eldest pupil has particularly distinguished himself by his great progress in the latter science. M. Kousi has taught them arithmetic, and M. Heiner algebra and mathematics, with much success, and they have

commenced the study of geography, with the help of large skeleton maps, in which the outlines of the countries, with their rivers and chains of mountains are only represented. These maps were first used by Pestalozzi, and have lately been partially used in the institution at Dublin. In some parts of the instruction of the children, M. Naef makes great use of the principle of simultaneous instruction of many pupils.

We learned many anecdotes of the boys of this school, all illustrative of their peculiar situation and feelings. One of them had gone to a fancy ball, with a great mask that had the mouth coarsely sewed up with cord, in allusion to his own dumbness. The next is more interesting. When the education of Louis Charles was sufficiently advanced, to admit of his receiving religious instruction relative to the truths revealed in scripture, M. Naef took occasion one day to lead him to a knowledge of a future life. As soon as he had seized the idea, (which was perfectly new to him,) and had comprehended its full import, he started up and exclaimed, "A présent je vais mourir content! Oh! je sais que je ne perirai point, que je ne mourira pas tout." Admirable words! worthy of an eternal being thirsting after immortality, and bursting at one bound into life and animation from the lethargic slumber of ignorance, and an overwhelming dread of annihilation at the moment of the flitting of the vital spark from this frail perishable house of clay. Well did the poet sing—

> "'Tis immortality, 'tis that alone
> Amidst life's pains, abasements, emptiness,
> The soul can comfort, elevate and fill."

Fearful, indeed, is the gloom of that state, which is cheered by no prospect of release: tremendous that awful foreboding of return into nothingness, which is often observed to bear down all the mind, wither the spirits, and blacken the sweet vision of life among the uneducated deaf and dumb. Hence that utter and overwhelming dejection which oppresses them in sickness, hence that instinctive and inconsolable terror which we have often seen seize the deaf and dumb at the approach, or even at the idea of death. There is no remedy for this in the pleasures of the world, for these are then just fading from his view; there is no balm for this in the attentions of friends; for he is then, as he thinks, on the point of an eternal separation; there is no medicine for this in hope, for with him all hope terminates in the grave. Let infidels say what they please; man does think on immortality. Let sensualists argue as they like, the scriptures alone give a remedy for the evils of life and death. Revelation

alone brings life and immortality to light, and proves that man is immortal, and we can have and need not have any other proofs.

We shall relate one other anecdote. A man of very profligate and immoral character in the town of Yverdun, with whom his pupil had been acquainted, died after a very short illness, subsequent to the above conversation. The pupil asked M. Naef whether he had gone to heaven or hell? He answered it was impossible for him to tell, no man could judge his brother; judgment belonged to his maker and master. Though excessively abandoned, he might have repented, and perhaps been forgiven. Ah! said the pupil, "Je n'aime point les peut-êtres, moi je ne veux pas un peut-être dans un cas d'un si grand importance. Je serai toujours très sage."

(To be continued.)

Art. IV. *Chirurgische Versuche von B. G. Schreger, der Philosophie, Medizin und Chirurg. Dactor, K. Baier. Hofrathe, der klinisch. Chirurg. Schule zu Erlangen Director, &c. &c.* 8vo. Nürnberg, 1818. 2ter Band.

Surgical Essays, by B. G. Schreger, Doctor of Philosophy, Medicine and Surgery, Lecturer on Medicine and Surgery, at Erlangen, Director of the Surgical Clinical School, &c. 8vo. 1818.

In the analysis of foreign works, our labours differ materially from those of our critical brethren in England. If we confine ourselves to extracting from a volume all that is interesting, without subjoining praise or abuse, it is not that we are deficient in all the modifications of critical spirit, such as direct commendation, indirect detraction, ironical hints, &c. &c. but that really among those who come before our tribunal, we have no friends to praise, and what is worse, no enemies to vex. Those to whom we allude, can never be objects of envy in England, and our most finished touches of censure would seldom reach the object for which they were destined, in the impenetrable gloom of a German university.

With these feelings, we shall pass over many little points in the work before us, and not even dwell on the facility of making a book out of few materials, by prefixing to each chapter a long detail of all that has been said on the subject before, it being a practice, we fear, by no means confined to German writers.

The first chapter of Dr. Schreger's present volume is upon the use of the ligature, for the cure of *fistula in ano*. He shortly relates the alternate estimation and disuse of the ligature; the principal objections to which have been the pain of the operation and slowness of the cure. To these are opposed the advantages which the ligature possesses:—1. There being no danger of hemorrhage. 2. The patient not requiring the frequent attendance of the surgeon to dress the wound. 3. The stools continuing to be voided without interruption. 4. The patient submitting to it with less fear than to an operation with the knife. 5. His being generally able to pursue his ordinary occupations, without the necessity of confinement to bed. Le Blanc operated with the ligature upon a blacksmith, who continued during the cure to shoe his horse, as usual. A patient of Camper's went daily abroad; and most of Dessault's patients were not confined to bed a single day, during the whole of the treatment. A countryman on whom the author operated, went to his daily labour. To people in a certain line of life this is a valuable recommendation of the ligature; but the author is not contented to rest upon this point, and attempts to prove that the ligature, when well employed, is actually less painful, and accomplishes the purpose frequently in a shorter space of time than the knife.

Dr. Schreger discusses, at sufficient length, the choice of the material for the ligature, the method of applying it, and the degree of tightness to which it ought to be drawn. For small fistulæ he recommends the silk ligature, which cuts through quickly, yet not more so than proper, as the healing of the parts will keep pace with it. If a fistula be very deep, he uses either silk well varnished over, or flexible metallic wire. In writing upon a practice adopted by Richter, Acrel, Dessault, Sabatier and Camper, he has found little difficulty in making up a paper of quotations, the object of which seems to have been to introduce the description of his own apparatus for conducting the ligature through the fistulous opening. This apparatus is ingenious, but too complicated; and, as the author does not give the results of much practice with it in his own hands, we do not think it deserving of a minute description. It is unnecessary when the opening into the gut is just above the sphincter, and inapplicable when the metallic wire is employed. Without granting all that Dr. Schreger wishes us, we have no hesitation in saying, that a relapse too frequently happens after the use of the knife—that the ligature is, perhaps, not sufficiently estimated; and that the latter should, at least, be employed in those cases where unreasonable apprehensions

of a cutting operation induce a patient to remain under the affliction of a loathsome and daily increasing disease.

The second chapter contains a simple narration of lithotomy in the female, with the bistoury or the scalpel. The only case that offers any circumstance beyond the most common occurrences, came under the author's own observation. Finding that the stone, on being grasped with the forceps, did not yield to a gentle force, he introduced his finger, and found the stone almost buried in a sac, from which situation he extricated it with the forceps and finger together, and then easily removed it; but on examining the cavity of the bladder afterwards with the finger, he could not find the sac in which the stone had been lodged.

The third chapter contains the particulars of two singular cases, which are the most valuable matter in the whole volume.

The first of these cases occurred in the child of an innkeeper, which was born with a small elastic roundish tumor upon the right buttock, not far from the anus. The infant was apparently well; but eight days after the birth, from the tumor being pressed upon, and the urine irritating the skin, it began to inflame and swell upon the surface so as to make the child restless. A surgeon directed the use of a saturnine lotion. Two days after this, the author first saw the child, when the tumor seemed to point at its most prominent part; and, regarding it as an abscess, he ordered a poultice. On the same day, the tumor burst, and through a small opening a little matter was discharged, with a considerable quantity of thin fæces. This appearance excited his attention, and made him suspect it to be an ischiatic hernia. This was proved to be the fact by further examination; for, on laying the child on its left side, and pressing the tumor inwards with the finger, it was completely returned, the small empty bag of skin only being left behind. The child crying, and the pressure being discontinued, the parts again descended, so as to fill the tumor to its former dimensions. After the tumor was completely reduced, a thick compress, dipped in goulard, was applied, and fastened by bandages. The nurse was directed, when dressing the child, to keep up a degree of pressure upon the part. In three days, the small opening closed, after which no more fæcal discharge came that way, nor did the child experience any inconvenience. In eight days, the tumor had entirely disappeared, the loose skin had contracted, and all redness had subsided. The compress was employed for a week or two longer, and a cure of the hernia completely accomplished.

The second case refers to a child a year old, which was

brought to a surgeon at Erlangen, for his opinion, about a tumor that existed at birth, but had not since then increased much in size. This tumor was situated on the left side of the lowest part of the sacrum, extending laterally towards the buttock, and downwards towards the rectum; it appeared round, circumscribed, prominent, elastic, and very moveable, so that it could be grasped around the basis as if adhering there only to a small extent. The pressure employed did not diminish its size nor give any pain; its most prominent part was at least an inch and three quarters above the surrounding skin, and its circumference was three inches and a half. The child was in health, and could bear to rest upon the tumor. The parents had never observed any difficulty in the discharge of the urine or fæces, nor any alternate increase and subsidence of the swelling. Dr. Schreger and another physician agreed with the surgeon, that the symptoms were such as to make them relinquish all suspicion of an *hernia ischiatica*, and pronounced the swelling to be an encysted tumor. Upon this presumption, the extirpation of the tumor, so much wished for by the parents, was undertaken. The child being placed upon its abdomen, a long incision was made through the skin covering the tumor, and the cellular substance was divided by repeated and careful incisions, in order to expose the cyst beneath. The cyst was, notwithstanding, opened accidentally in the progress of the dissection, and an ounce of clear yellow fluid spirted out. The sac collapsed, and was drawn up with a pair of forceps, but could not be separated at its base, where it seemed to be firmly attached to the cellular substance. Such an adhesion being not unfrequently found at the root of encysted tumors, the surgeon cut it through horizontally, removing the cyst in which the clear fluid had been contained. The wound, which bled very little, was closed, and the child for the first day after the operation was lively and well; but in the evening it became restless and feeble, which state was succeeded by convulsions, that proved fatal on the following day.

The dissection of the body shewed what a mistake had been made in the diagnosis. On the abdomen being opened, there was no bladder presenting itself in the usual situation, with its fundus rising upwards towards the navel; the bladder being drawn backwards, downwards, and to the left side of the sacrum, like a long tube, one extremity of which, an inch and a half in breadth, reached to a hollow by the side of the rectum, in the situation of the sciatic notch. The bladder here contracted to two lines in diameter, and adhered to the surrounding parts, corresponding exactly to the situation where the supposed sac

had been cut through at its base in the operation. A sound being passed to the bottom of the wound from without, entered this narrow canal, and reached the cavity of the bladder.

The whole of these parts were now removed, and the particulars of this singular mal-formation more fully explained. The bladder had consisted of two bags, which were made into a common cavity by a narrow intervening stricture. One of these divisions of the bladder was in the cavity of the pelvis, as already described, and received the ureters; the strictured portion of the bladder laid in the sciatic notch, next the superior sacro-sciatic ligament, and below the pyriformis muscle; the other portion of the bladder, forming the rupture, was without the pelvis, presenting itself as a tumor under the skin, and had been completely cut away by the operation. This part, indeed, answered to the fundus of the bladder, being covered by peritoneum, and also by a portion of meso-rectum, which had been pushed before it as a hernial sac; but these two surfaces had adhered together, forming distinct layers in the supposed sac, that was removed by the operation. The sacrum, ischium, sciatic nerve, ligaments, and pyriformis muscle, all had their natural situation; and no deficiency was found in the form of any of these parts.

From this case it is shewn that the bladder, besides protruding in the ordinary places, may form an external tumor by passing out of the pelvis by the sciatic notch, a *cystocele ischiatica.*

The rarity of sciatic herniæ might lead our readers to suppose, that it is a matter of little consequence to be acquainted with them; but this very circumstance, together with the difficulty of the diagnosis and the mistakes into which surgeons have been betrayed, seems, in our opinion, to prove the necessity of attending to such cases, and gives importance to every new record upon the subject. It will be well to take the advice of Dr. Schreger, which he offers upon information purchased at a dear rate,—"always to treat a suspicious tumor in this situation at first as a hernia, and not to think of any other means, until the further progress of the case has explained its real nature." Camper, Lassus, and Richter, have described ischiatic herniæ, which were generally mistaken for tumors of another description; and Astley Cooper has given the history of a case where the patient died from mortification of the strangulated gut, before the nature of the disease was discovered.

Two cases of another rare species of hernia, the existence of which has been doubted, are to be found in this chapter. We allude to cases where the hernia is complicated with a prolapsus ani, and descends by the side of the rectum, or between the

rectum and vagina, forming a tumor about the perinæum. Both the cases occurred in adults, and one of the predisposing causes is conjectured, and in some degree proved, by the author, to be a want of the natural obliquity of the pelvis. In one of these cases the hernial tumor sloughed and burst, the fæces being discharged through the opening, and in this instance the exact state of the parts was ascertained by dissection.

In the above cases, the prolapsus ani had long preceded the hernial tumor, so as to become habitual. They are different from what has been described as perineal herniæ, and met with both in the male and female, the gut descending between the rectum and bladder, or rectum and vagina, but not reaching so low as to present an external tumor, and to be detected only by examination through the vagina or rectum.

The fourth chapter is entitled, "Contributions to the history of the diseases of the joints." The disease, the author informs us, which has been described under the title of coxalgia, is not confined to the hip, but may happen in the shoulder joint, or any other joint in the body. A child, ten years old, had complained much of pain in the shoulder extending to the elbow: there was no redness or superficial swelling. The pain increased towards evening, and was worst during the night. The arm became weak, and nearly lost all power of motion. The elbow was kept in a bent position, was thrown a little out from the body, and could not be altered from that situation, because the slightest motion of the shoulder-joint produced intolerable pain. The disease having existed for some time, the whole arm wasted, and was smaller than the other. The point of the shoulder, compared with that of the healthful side, was less prominent, and rather depressed. The head of the humerus appeared to be pushed a little outwards, so that the horizontal measurement of the shoulder of the afflicted side was greater than the other. The arm was lengthened above the fourth of an inch. At first sight, it was supposed to be sub-luxation of the joint; but the history, and a closer examination, convinced the author that the symptoms had arisen from chronic inflammation of the shoulder joint. After the employment of mild means without effect, an issue was kept open in the neighbourhood of the joint, which in a few days relieved the pain, and by degrees removed all the symptoms. Three weeks, however, elapsed, before the swelling of the internal parts had so far subsided as to allow the humerus to take its proper situation.

The congenital lameness, which is met with in infants without any apparent cause, has been ascribed by Palletta to an imperfect formation of the head of the os femoris, the neck being

unusually short, sometimes hardly perceptible, or continued nearly in a straight line with the shaft of the bone. Dr. Schreger relates two dissections, to prove that other causes may give rise to this deformity at birth.

Of seven children in one family, three were born with a shortening of one of the lower limbs, that produced lameness. They all lived to a considerable age. One, who died at the age of forty-eight years, had the imperfect limb an inch shorter than the other, the thigh and leg greatly shrunk, and the knee and foot turned inwards. On dissection, the principal muscles of the thigh were found thin and slender, the gluteus minimus converted into a fatty substance, and the middle of the psoas magnus and iliacus internus muscles changed into cartilage. In the place where the acetabulum is usually found, there was a long ridge with a groove in the centre; and above and behind this, lay the head of the femur, upon the dorsum of the ilium, fixed by a capsule and ligamentous structure. The head of the femur had its regular shape and dimensions, but the ligamentum teres was wanting, a depression marking the situation where it should have been.

This dissection shews, says Dr. Schreger, that the congenital lameness does not always depend upon the same cause, an irregular formation of the neck of the femur; but may arise from a mal-formation of the acetubulum. The appearances above detailed resemble those which are sometimes found after an early dislocation of thigh bone, where the dislocation of the femur forms for itself an imperfect acetabulum upon the dorsum of the ilium; but such an accident is not to be suspected in the above case, because the shortness of the limb existed at birth, and the fætus in utero has no power to produce such an effect as luxation of that joint. Upon arguments derived from the growth of bones of the hip joint in the fætus, Dr. Schreger concludes, that the absence of the round ligament could be the only cause of the congenital lameness, by the head of the femur getting into an improper situation. For our own part, we should hesitate to accept this deduction, because it must be impossible, at so remote a period from birth, to get a history of the first symptoms of the deformity to be relied upon, and because the appearances do seem very much to favour the opinion of an early dislocation of the hip joint, by which the ligamentum teres would be broken up and gradually absorbed. The dissection discovers one curious point, the change in the structure and appearance of muscles from their proper action being interrupted throughout the whole course of life, and this may perhaps be sufficient recompence for our having entered into the particulars of the case.

In another instance, a child, lame from birth, lived to the age of three years and a half, and when the body was examined, the round ligament was found unusually long, so as to allow of a degree of subluxation, to which the author attributes the lameness and shortening of the limb.

Some observations and a case follow on the accumulation of fluid in a cyst in front of the patella, and the diagnosis between this tumor and that spongy swelling of the joint, which Mr. Brodie has explained to be a morbid change of the synovial membrane. This tumor upon the patella, however, is, according to Dr. Schreger, not formed in a bursa, as has been described, but a circumscribed cavity formed of condensed cellular substance on the anterior surface of the patella, which cavity varies much in different individuals, being often in the same subject large on one side and hardly discoverable on the other. He has also treated a similar tumor upon the prominent part of the elbow, but has not ascertained whether the fluid be contained in the *bursa anconea* or not.

The author next proposes, in a short chapter, to treat severe cases of entropium, where all other means have failed, by removing the whole margin of the eye-lid for the breadth of a line. As the eye-lash after this operation can never grow again, the patient loses all advantage from it in shading and protecting the eye; but this is of little importance in comparison with the perfect relief obtained from a painful complaint that threatens to destroy vision, by producing complete opacity of the cornea.

The concluding chapter embraces some accidents from wounds, the most important of which proceeded from a stab of the left side of the chest. The knife entered obliquely between the third and fourth rib, midway between the sternum and axilla. The small quick pulse, oppressed breathing, coughing and spitting of blood, and slight movement of the left side of the chest in respiration, were symptoms of the lung being wounded; and the weight and pressure in breathing, which increased on the patient being raised up, indicated that blood was extravasated into the cavity of the pleura. The patient could not lie on the wounded side, and as there was no bleeding from the wound, it was probable the accumulation of blood was remote from it, towards the lower part of the cavity of the pleura. The wound from the accident was therefore closed, and paracentisis of the chest practised in a situation more favourable for the discharge of the extravasated fluid. The patient being placed in a leaning posture upon the side of the bed, the integuments were opened between the eighth rib, equi-distant from the spine and the sternum, by an incision two inches long; the muscles were cut

through step by step, until the pleura appeared, which was punctured so as to admit a probe-pointed bistoury, with which the opening was enlarged forwards and backwards to the extent of an inch. The blood immediately flowed away freely, and when it stopped, a change in the position of the patient, by placing him more horizontally and inclining him more to the left side, made it flow again, until about ten ounces were discharged. The wound was closed by proper compress and bandages; the patient was restored to a comfortable state of breathing; and the feeling of weight in the chest was greatly diminished.

On the following day there was more fever, a fuller quicker pulse, a darting pain in the lung near the wound, and a frequent troublesome cough, and the discharge was streaked with blood. Emphysema appeared about the upper wound, and spread over half the chest. From the lower wound there was a discharge of two or three dessert spoons full of blood, when the body was inclined to that side. The treatment consisted in the administration of glysters and mild mucilaginous drinks.

These symptoms of inflammation of the lungs lasted, in much the same degree, for nine days, when the cough and pain in the chest abated, and the pulse became more quiet. The movement of the left side of the chest was still interrupted in respiration, the patient was again desponding, and complained of oppression and weight in breathing. On the eleventh day, the artificial wound being opened, a quantity of reddish serous fluid flowed away in a stream to the amount of nine ounces. This was the result of inflammation in the chest, which had ended in serous effusion, forming a true hydrops pectoris. This secretion into the cavity of the pleura went on for above a month, more or less fluid escaping daily from the wound. Afterwards, the fluid only passed from the wound when the patient coughed; and, at length, injections of warm water were required, to bring away the thicker part of the fluid that remained. The left side of the chest regained its motion in respiration, and the patient remained well for years afterwards, being so free from any affection of the chest as to become a performer on the flute.

The last pages of the present volume are filled with the account of a maniac, who, in a fit of frenzy, cut off the whole of the genitals, and opened the cavity of the abdomen (wounding one of the intestines), and yet ultimately recovered. It appears singular that, neither in this nor in the preceding case, has the writer mentioned the employment of blood-letting to obviate the dangerous effects of inflammation. We hope, for his credit, that the omission has been in the *history*, and not in the *practice*.

ART. V. *De L'Auscultation médiate, ou Traité du Diagnostic des Maladies des Poumons et du Cœur, fondé principalement sur ce nouveau Moyen de l'Exploration, par R. T. H. Laennec, D. M. P. Médecin de l'Hôpital Necker, &c. &c.* 2 tom. a Paris, 1819.

THIS is a very interesting and important work. It submits to the world a new system of diagnosis, applicable to those diseases in which the obscurity and uncertainty of the diagnostic means at present in use, have often been acknowledged and lamented.

The author, M. Laennec, is a pupil of the celebrated Corvisart, and has for the last eighteen years devoted himself to the study of pathological anatomy, the fruits of which are found in the variety of new and interesting observations with which he has enriched his work. The observations before us are the result of three years exclusive attention to the subject.

To disarm any prejudice which the title of the work may create, and engage a favourable attention to the author's subsequent details, we shall prefix to our own analysis of the work, the opinion of the Committee of the Institute who were appointed to examine its merits.

The following extract is from the proceedings of the Sitting of 29th June, 1819:—

"In one of the preceding Sittings, the Academy deputed Messrs. Portal, Pelletan and Percy, to make a Report on a Memoir, read by Dr. Laennec, and entitled '*A Memoir on* AUSCULTATION, *by the aid of different acoustic instruments, employed as a method of examination in diseases of the thoracic viscera, and particularly in phthisis pulmonalis.*'

"The trivial advantages which are derived in most cases from the percussion of the chest, according to Avenbrugger's method, and the facility with which sound is transmitted through solid bodies, suggested to the author the idea of attending, by the aid of intermediate substances, to the different sounds which the movements of the respiratory and circulatory organs may produce in the interior of the chest, and to inquire whether the sounds in question gave more certain signs than those which we already knew, relative to the diseases of the organs contained in this cavity. He believed this question might be answered in the affirmative. The *auscultation* of sound produced by the mechanism of the voice and respiration,* by the pulsations of the heart, and in certain cases by those

* The author uses another term, which we find great difficulty in translating—it is râle. He explains the sense in which he uses this term elsewhere, (vide

of the corta, is, according to him, possible and even easy, by means of an intermediate body, which, according to circumstances, may be a full cylinder, a thick tube, or a tube widened at one of its extremities in form of a funnel. The first instrument is most convenient for ascertaining the pulsations of the heart and aorta; the second serves for examining the voice, and the third for the various sounds produced by respiration."

The author presents to the academy only a part of his researches relative to the investigation of the voice. We subjoin a short analysis of it.

" The instrument which M. Laennec uses for this purpose is a cylinder a foot long, sixteen lines in diameter, and perforated in its centre by a canal about three lines in diameter. When this cylinder is applied to the chest of a healthy person, in the act of speaking or singing, nothing is heard but a kind of low murmuring (frémissement), more distinct in some parts of the chest than in others. But, when there is an ulcer in the lungs, this murmuring is changed, and the effect is altogether singular. The voice of the invalid then ceases to be heard by the ear which is disengaged, and it comes to the observer entirely through the canal formed in the cylinder. We have established this fact on many consumptive persons whom the author has brought to us. It appears to us striking, and very likely to furnish a certain diagnostic sign of some changes in the lungs, which in the actual state of medicine could scarcely be imagined. M. Laennec attributes this phenomenon to the stronger sound of the voice in a cavity more extended than the bronchiæ. His opinion appears the more probable, as the same phenomenon occurs when the cylinder is applied to the trachea or larynx. This phenomenon, to which M. Laennec gives the name of pectoriloquism, presents several varieties, which the author distributes into three classes, under the names of *perfect*, *imperfect*, and *doubtful* pectoriloquism. Many of these varieties point out circumstances of the utmost importance relative to

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S. 474). " Under the name of ' râle' is commonly denoted that confused murmuring noise which is heard in the dying, caused by the air passing with difficulty through the saliva, which the lungs are no longer able to expel. For want of a more generic term, I take the word in a more extended signification, and understand by ' râle' all the noises produced by the passage of the air, during the act of respiration, through whatever fluids may be found in the bronchiæ or pulmonary texture." Of these the author enumerates four principal varieties, which he thus describes:—1. Le râle humide, ou *crepitation*. 2. Le râle muqueux, ou *gargouillement*. 3. Le râle sec sonore, ou *ronflement*. 4. Le râle sibilant sec, ou *sifflement*."

ulcers of the lungs, and especially as to their size, their state of fulness and emptiness, and the consistence of the matter contained in them. The author has confined himself to the simple exposition of these facts, and of the consequences which may be drawn from them in the diagnosis of phthisis pulmonalis. He has not thought it right to take up the time of the academy with the other practical inferences which it is possible to deduce from them.

" Although the study of pulmonary consumption by the auscultation of the voice is the principal object of the Memoir we are now noticing to the academy, we have thought it incumbent upon us to verify also what the author advances concerning the auscultation of respiration, and of the heart's pulsations. We have, in consequence, listened with the cylinder to the respiration of a healthy man, in different parts of the chest, and we have found that it is heard distinctly in all parts of this cavity which correspond to the lungs. We have found likewise that the motions of the heart are heard in the most distinct manner; and therefore it appears to us, that the author's assertions as to the possibility of obtaining by these two kinds of auscultation, certain signs of many diseases of the lungs and heart have, at least, a very high degree of probability.

" The idea of applying the ear to the chest, and of ascertaining in this way the symptoms of the alteration in the organs which it contains, is not altogether new. Hippocrates (Lib. II. de Morbis), recommends this application at the side of the thorax to discover the existence of empyema. But this mode of proceeding, according to M. Laennec, absolutely gives no indication.

" Some physicians had also been long in the practice of applying the ear to the region of the heart, in order to discover more accurately the strength of its pulsations; but this method had never given satisfactory results, for reasons which the author in part explains, and which he proposes to develope with more details in another Memoir.

" Your Committee, in rendering to Dr. Laennec (already most creditably known by his learned researches on different medical subjects), all the justice which is due to him, have the honour to assure the academy that this physician, of whose titles to confidence and public esteem they are not ignorant, has merited its particular favour, and a special testimony of its approbation for this new work.

(Signed) Portal, Pelletan,
Percy, *Registrar.*

" The Academy approves the Report, and adopts the conclusions.——Delambre."

In a work comprising so much variety, and consisting of two octavo volumes, it is difficult to give such an abstract as will convey a correct idea of the labour and intelligence of the author, and do justice to the zeal and ability which he has displayed. His object will, therefore, be best explained in his own words. "Convinced," says he, "of the practical utility of the method of investigation which I am proposing, I have thought it my duty to neglect no means of making the practice general; and it appeared to me, that the best way in which I could do this, was to connect the exposition of this method with a more exact description than any which hitherto exists of those organic changes which it is its object to discover. This plan serves at once to render its employment more easy, to demonstrate its advantages, and to connect the remembrance of it with that of many other facts.

"The principal object of my work being to make known the advantage which may be derived from the use of the cylinder, in distinguishing the different diseases of the lungs, I have thought every thing should be subordinate to this purpose; and, even the facts from pathological anatomy, although occupying a very considerable space, are only inserted as accessaries. I have, therefore, been led to separate things, which in a treatise of medical practice, or of morbid anatomy, ought to be united. The first part of this work, for example, is almost entirely devoted to phthisis pulmonalis. Many important facts referable to the same disease are, however, found in the second, the third, and the fourth part; because the respiration, (*le râle,*) and even the pulsations of the heart, afford indications relative to many circumstances of this disorder.

"I have cited but few authors. The path which I had to follow was nearly new. I have confined myself almost entirely to the works of M. Corvisart and M. Bayle, as presenting very nearly the actual state of our knowledge of diseases of the heart and lungs. If I have sometimes combated their manner of viewing the subject, I hope that no one will misinterpret the motive which has led me to do so. United from the commencement of my studies to M. Bayle, by ties of the most tender friendship, and the disciple of M. Corvisart, no one has been led more than myself to appreciate their personal merit and that of their works; and although sometimes obliged in defending the interests of science, to attack the opinions of my master and those of my friend, I do not feel the less gratitude for all that I owe them. It is more easy to cultivate a well prepared field than to clear a rough barren soil. I must, besides, observe, that the works of M. Corvisart, edited by

strangers, are very far from giving an idea of the author's meaning in its full extent. It is to be regretted, that his numerous occupations, and a state of deplorable bodily health, should not have permitted him to accomplish the task himself. The uncertainty in the signs attributed to each malady, the vagueness of the descriptions are sufficiently striking to those who, educated by this great physician, have so often witnessed the boldness and certainty of his diagnosis. This, however, depends in part on the circumstance, that he employed that indefinable tact which constitutes a great part of the art of medicine, and which he possessed in the highest degree."

M. Laennec begins his work with some observations on the difficulty of forming a diagnosis in diseases of the lungs. He adduces the testimony of Baglivi, to show that the diagnosis of pulmonary diseases must necessarily be incomparably more obscure than that of the affections of any other internal organs. In fact, the diseases of the brain, by no means numerous, are known, in general, by certain and striking symptoms. In the affections of the abdomen, the parietes being soft and pliant, we can feel the organs which they contain, and judge to a certain extent of their size, their position, their degree of sensibility, and the accidental productions which may be there developed. Thoracic diseases, on the contrary, being extremely numerous, and very diversified, have almost all similar symptoms. Cough, dyspœnea, and in some expectoration, are the principal and most striking; and the varieties which these symptoms present, do not correspond in a regular manner to the diversities of organic changes which occasion them; so that the most experienced physician is often at a loss. "I am not afraid," says the author, "of being contradicted by those physicians who have been employed regularly and for a certain time in morbid dissections, when I assert, that before the discovery of Avenbrugger, the half of peripneumonies and acute pleurisies, and almost all cases of chronic pleurisy might necessarily be mistaken; and even in cases where the examination of an experienced physician might lead him to suspect something, it could seldom inspire him with sufficient confidence to determine him to employ a bold remedy in consequence of such a suspicion. Percussion of the chest, according to the method of the ingenious observer just recited, is certainly one of the most precious discoveries with which medicine has ever been enriched. It has subjected to the immediate decision of the senses many diseases, which till that time could only have been known by general and equivocal symptoms, and has rendered the diagnosis as certain as it is easy. This method, however,

leaves much to be desired. It often points out nothing in pulmonary consumption, and cannot in any case distinguish this disease from chronic peripneumony. Even in peripneumony it affords but little aid, when the inflammatory obstruction occupies only the centre of the lungs, or when the two lungs are affected slightly or nearly equally. It affords no proper signs by which to distinguish this disease from pleurisy, hydrothorax, or any other effusion into the pleura. It furnishes no means of knowing pneumo-thorax, or rather it becomes an almost necessary cause of error in this case. It does not enable us to discover diseases of the heart, except when this organ is become greatly enlarged; and too often death occurs before the disease arrives at this degree. It has never given any indications of the existence of aneurism of the large vessels, but in cases where the application of the hand and even the sight would have furnished much more certain ones."

The results of percussion are besides doubtful when the absence of sound only exists in the right inferior side of the chest. They are often deceitful when the chest is deformed, even to a slight degree by the effect of rickets; lastly, they are very uncertain, and often inapplicable, when the integuments of the chest are distended with a considerable quantity of fat. The art of percussion, besides, although very simple in appearance, requires long practice, and a dexterity which few men can acquire. The slightest difference in the angle under which the fingers strike the thorax, may lead one to suspect a difference of sound which in reality does not exist. Many physicians are unable to produce this percussion without employing such force as to make the process very painful to sick persons. And a chest, the sound of which has appeared almost dull when struck in a chamber that is small, or filled with furniture, or in a bed surrounded with thick curtains, will appear the day after much more sonorous if the experiment be made in a larger apartment, or in an arm chair.

It is in diseases of the heart especially that a more consistent and certain sign is desirable than that afforded by percussion. Some physicians have in these cases applied the ear to the region of the heart, and some the touch. But these practices are both objectionable, and cannot be brought into general use, even if they were not liable to error on other grounds.

" I was consulted," says M. Laennec, " in 1816, by a young female, who had some general symptoms of a disease of the heart, and in whom the application of the hand and percussion would give unsatisfactory results on account of her enbonpoint. The age and sex of the patient forbidding that kind of

treatment of which I have just spoken, I brought to my recollection an acoustic phenomenon well known. If the ear be applied to the end of a beam, one hears distinctly the scratch of a pin at the other end. I imagined that one might, perhaps, draw a useful hint in the case in point, from this property of bodies. I took a sheet of paper and formed a roll of it well secured, of which I applied one end to the region of the præcordia, and placing the ear at the other end, I was as much surprised as gratified in hearing the heart beat more clearly and distinctly than I had ever done by the immediate application of the ear."

With the conviction, that this method might become useful in inquiries relative to many other diseases, he commenced a series of experiments at the hospital Necker, and obtained as the result many new signs adapted to render the diagnosis of almost all the diseases of the lungs, pleura, and heart more certain and circumstantial, according to his ideas, than the chirurgical diagnosis established by means of the sound, or introduction of the finger.

The work is divided into four parts:—

The first contains the impression produced by the organs of voice on the ear applied to the cylinder; the second, those furnished by respiration; the third, those afforded by the râle (see the explanation given at page 51); and by way of appendix, the results of his researches in the fluctuation of fluids effused into the cavities of the thorax; the fourth contains the analysis of the heart's pulsations in a state of health and of disease, and the particular symptoms of the diseases of the heart and the aorta.

The author made various experiments with different substances, in order to ascertain what was best adapted for the purpose of his inquiry.

The most dense bodies, as analogy would lead one to suppose, are not the best calculated for forming such experiments. Glass and metals, besides their weight, and the sensation of cold which they occasion, do not communicate so well as bodies less dense the pulsations of the heart, and the sensations which respiration produces. There is a medium, however, to be observed, and of all substances which he tried, bodies of such a density as paper, wood, and cane, are those which appeared to be preferable to all others. He observes this result is, perhaps, in opposition to a physical axiom, but it appeared to him invariable. He also observes, that an instrument with a small hollow, is indispensable for examining the voice, but a full or solid body is the best for discovering the state of the heart.

"I now," says he, "make use of a cylinder of wood, with a

hollow tube in the centre, three lines in diameter, and divided in the middle by means of a screw, in order to make it more portable. One of the extremities is widened to the depth of about an inch and a half in the shape of a funnel. The cylinder so disposed is the instrument best adapted for ascertaining the state of respiration. It may be converted into a simple tube with thick sides, so as to explore the voice and pulsations of the heart, by introducing into the funnel an end-piece of the same kind of wood so as exactly to fill it, and which is fixed by means of a small copper tube passing through it, and entering into the hollow of the cylinder to a certain depth. The instrument is a foot long, and an inch and half in diameter."

In all cases, the cylinder, or stethoscope, as he sometimes calls it, should be held as a pen in writing, and the hand should be placed very near the breast of the patient, that he may be satisfied the instrument is properly applied.

The end of the cylinder intended to be applied to the chest, and the extremity which is formed by the end-piece or cover, ought to be slightly concave. Some of the effects which are obtained by this sort of inquiry are easy to be discovered, and it is sufficient to have once *heard* them, to know them again; such are those indicated by ulcers in the lungs, excessive enlargement of the heart, fistulous communication between the pleura and bronchiæ, &c.

But there are others which require much study and practice; and, as this mode of inquiry carries the precision of diagnosis much farther than others, it is necessary also to bestow more pains, in order that every possible advantage may be derived from it. The author admits that one can scarcely acquire, except in hospitals, complete dexterity in the practice of *mediate auscultation*, inasmuch as it is necessary to have confirmed, by actual inspection, the diagnosis established by means of the cylinder, to be sure of one's self and the instrument, to take confidence in one's own observation, and to be convinced by the sight, of the certainty of signs afforded by the sense of hearing. It is generally sufficient to have observed a disease two or three times, to learn to know it again thoroughly; and the greater part of pulmonary affections, and those of the heart are so common, that after having studied them for eight days in an hospital, there will remain scarcely more than a few rare cases, which will almost all be met with in the course of a year, if all the sick be carefully examined.

On Exploration of the Voice in general.—When a healthy man

speaks or sings, his voice resounds in the interior of the chest, and produces in the whole extent of the parietes of this cavity a sort of noise (frémissement) easy to be distinguished by the application of the hand. This phenomenon no longer exists, when by the effect of any disease the lungs have ceased to be pervious to the air, or are found to be separated from the thoracic parietes by a liquid effusion. This sign, however, is but of little importance, as many causes may vary the intensity of the sound, or even entirely destroy it. It is not very perceptible in fat persons, in those whose integuments have a certain flaccidity, nor in those who have a sharp or weak voice. In men of the best conformation, it is not very evident, except at the anterior superior part of the chest, upon the ribs, and in the middle of the back. Lastly, this peculiar noise having, in no case, any great intensity, it is difficult to make comparative examinations with regard to it, and consequently to draw from it results applicable to the diagnosis of pulmonary diseases. As it is not very easily perceived but by applying the whole hand to the chest, one can only conclude, when it exists, that a great portion of the lungs is pervious to air; but one cannot precisely determine the point where it is impervious, if it takes place towards the inferior part of the chest, as occurs very frequently in peripneumony.

But in order to complete the series of experiments, the author endeavoured to establish even to what point the cylinder communicates to the ear the sound (le frémissement) of the action of the thoracic *parietes*.

The points where the intensity is greatest are at the arm-pit, the back, between the internal edge of the shoulder blade and the vertebral column, and the anterior superior part of the chest, towards the angle formed by the union of the sternum with the clavicle. When the cylinder is applied to these points, the voice appears much stronger and nearer the observer than it does to the naked ear. In the other parts of the chest, on the contrary, especially below and behind, it appears weaker and more distant.

In prosecuting his researches as to the comparative sound of the voice in a number of healthy and diseased subjects, he was struck by a very singular phenomenon. The case in which it occurred, was that of a female about twenty-eight years of age, who was attacked with a slight bilious fever, and a recent cough, which presented no other characters than those of pulmonary catarrh. On applying the cylinder below the middle of the right clavicle, and directing the patient to speak, her voice seemed to proceed directly from the chest, and to pass entirely through the central canal of the cylinder. This phe-

nomenon only took place to an extent of about a square inch. Nothing like it was found in any other part of the chest. Not knowing to what this phenomenon was to be attributed, M. Laennec examined, in regard to it, the most part of the patients then in the hospital, and he discovered it in, at least, twenty of them. Nearly all were consumptive and arrived at an advanced stage of the disorder; in others, the existence of tubercles was still doubtful, although there were reasons to fear their presence. But two or three, like the woman who had first exhibited the phenomenon, presented no symptom of this disease, and their enbonpoint, as well as the state of their strength, seemed even to remove all fear with regard to it.

From that time, however, he was led to suspect that the phenomenon in question might be owing to those irregular cavities which are produced by the softening of tubercles, and known by the name of pulmonary ulcers. The existence of this phenomenon, in subjects who had no symptom of phthisis pulmonalis, did not destroy this conjecture; because it often happens that we meet with tubercles, and even ulcers in the lungs, in subjects dead of acute diseases, in whom phthisis has been always latent. The most part of the patients who exhibited this phenomenon having died at the hospital, he was enabled to confirm by actual inspection, what he had so rightly conjectured. In all of them he found cavities more or less large, owing to the softening of the tuberculous matter, and communicating with bronchial ramifications of a variable diameter. He found that *pectoriloquism* (as he named this phenomenon), was by so much the more decided, as the ulcerated cavity was nearer to the surface of the lungs, and that it never was more striking than when, in consequence of this viscus adhering intimately to the costal pleura, the parietes of the thorax formed almost immediately a portion of those of the ulcer—a circumstance which, as is well known, often happens.

He was, therefore, naturally led to think, that pectoriloquism is owing to the stronger and more perceptible sound of the voice, in points where it is re-echoed by a more solid and extended surface. Consequently, he presumed that a phenomenon analagous to it should take place, when the cylinder is applied to the larynx and the trachea of a healthy man. His conjecture was found to be correct. There is a perfect identity between pectoriloquism and the voice proceeding from the larynx through the cylinder, and this experiment is even a very good means of giving an exact idea of pectoriloquism, when one has no such patients at one's disposal.

Consumptive persons forming more than a third of the

patients in the hospitals of Paris, numerous facts enabled him to ascertain the varieties in the phenomenon, the practical inductions, and the cases of exception.

Of Pulmonary Consumption, or Tubercular Affection of the Lungs.—The cavities which produce pectoriloquism, are those which are commonly called ulcers in the lungs. They are not, as has been generally thought, and as the generality of practitioners still think, an effect of the inflammation and suppuration of the pulmonary texture. The recent progress of morbid anatomy has clearly demonstrated that these cavities are owing to the softening and consequent evacuation of a particular kind of accidental production, to which modern anatomists have given the name of tubercle, a word formerly applied, in general, to every kind of tumor or preternatural protuberance. The existence of tubercles in the lungs is the cause, and constitutes the proper anatomical character of phthisis pulmonalis.

The author here wishes to be understood as treating only of tubercular consumption. He thinks that no other species of pulmonary consumption ought to be admitted, unless nervous phthisis or catarrh, assuming the appearance of tubercular phthisis. All other species are at bottom, he supposes, tubercular consumption, and only differ according to the cause to which we attribute, perhaps gratuitously, the developement of tubercles. Tubercular cavities differ essentially from an ulcer in this, that the latter extends itself by corroding the texture in which it is found, whilst the former, being the spontaneous destruction of an accidental production, which has removed and pressed against, but not destroyed the pulmonary texture, have no tendency to enlarge themselves at its expense. Bayle has described the progress of the developement of these morbid productions more clearly than any one before his time. M. Laennec, however, with a view to the more complete elucidation of his subject, and to rectify or extend some of M. Bayle's observations, thinks it necessary to give an abridged description of the characters of tubercles, and their mode of developement. For this able description we must refer our readers to the work itself, and proceed to that part which more immediately treats of the author's new method of inquiry.

The most common seat of these excavations is in the superior lobes of the lungs: it is in this part that tubercles are usually first developed; consequently it is there that they are most frequently found enlarged and advanced; and for the same reason, the points of the chest where pectoriloquism is most frequently discovered are its anterior superior part, the arm-pit,

the space comprised between the clavicle and the trapezius muscle, and the superior and inferior spinous fossæ of the scapula. The thickness of the scapula and its muscles does not hinder the perfection of the phenomenon, although it appears to render the voice less sonorous.

Pectoriloquism is evident or doubtful: it is evident when it presents completely the characters mentioned above. As often as we meet with this phenomenon, even if it be perceptible but for a few moments at a time, we may pronounce with certainty that there exists in that part of the lungs corresponding to the point of the thoracic parietes where the sign is manifested, a preternatural cavity communicating with the bronchiæ. The characteristic phenomenon of pectoriloquism becomes more striking, if we stop the free ear with the hand. We then discover, with the strongest evidence, that the voice of the patient and the articulation of his words are transmitted through the cavity of the cylinder.

Pectoriloquism is doubtful, when in applying the cylinder upon a certain point of the chest, the voice of the patient appears a little sharper and slightly feigned, like that of ventriloquists, or that it resounds under the cylinder with more force than it does to the naked ear; without it otherwise appearing to pass through the tube. We may have an exact notion of doubtful pectoriloquism by applying the cylinder between the inner shoulder blade and the vertebral column, towards the points corresponding to the origin of the bronchiæ, on a lean subject with a sharp voice, but otherwise healthy. It naturally exists in persons who unite these conditions, and even more or less in all, for the reasons above stated.—(f. 25.)

In thin or emaciated children, whose breasts are straight, the proximity of the bronchiæ affords even sometimes at this part an evident pectoriloquism, although the lungs may be sound. We ought not, for the same reason, to draw unfavourable conclusions in many cases of doubtful pectoriloquism, when it only exists in this point, under the arm-pit, or towards the junction of the sternum and clavicle. We may even extend this proposition to all the anterior superior part of the chest, as high as the third rib, when the phenomenon is very doubtful, and that it exists equally on both sides; for the upper part of the superior lobe of the lungs contains, in a relative proportion, more bronchial ramifications than the other parts of this organ; and their branches, sometimes very superficial, often produce the phenomenon in question, especially when the lungs are adhering to the pleura. But when doubtful pectoriloquism is met with in those parts of the chest situated below the third and fourth rib,

or only in one side, and not in the other, it is at least a strong presumption of the existence of a morbid cavity; and, if at the same time it does not exist in the other points above mentioned, this equivocal presumption has a complete certainty, and we may safely conclude that the cavity is situated deeply in the pulmonary texture, or that it is still in a great measure filled with tuberculous matter imperfectly softened. In whatsoever point of the chest it may be, when the resounding of the voice is much stronger than on the opposite side, and especially when it is so intense as to appear much nearer the ear of the observer than when he listens with the naked ear, the sign is as certain as if the voice passed evidently through the tube, and pectoriloquism is *imperfect*, and not *doubtful*.

Moreover, between the most perfect pectoriloquism and that which is altogether doubtful there are degrees which are easily learned by practice, and which it would be as superfluous as difficult to describe. Thus, for example, the voice seems sometimes to be a little introduced into the extremity of the tube, but not to be capable of passing through it entirely. But the comparison of signs obtained by respiration with those of percussion, enable us to appreciate the importance of imperfect or doubtful pectoriloquism.

Pectoriloquism is so much the more evident as the voice of the patient has a sharper tone. Women and children present it in the most striking manner, and are consequently those on whom we must be most on our guard against that doubtful pectoriloquism which exists naturally in some parts of the chest. In men with a very deep and grave voice, on the contrary, the phenomenon is often imperfect, and sometimes doubtful, even when there are excavations on the lungs in a state best fitted to produce it. The more deep or hollow the voice, and the more strongly it resounds on the interior of the chest; the murmuring (frémissement) of the thoracic parietes, of which we have spoken above, becomes so intense, that it in a great degree masks or covers pectoriloquism. The voice, being too much agitated, and trembling as it were, seems as though it could not enter into the tube, and resounds only at its extremity with a strength and volume often double or triple what it presents to the ear that remains free. It seems, in a word, as if the patient spoke in a speaking trumpet close to the observer, and not as if he spoke to him in the ear by means of a tube. But this phenomenon, though it be less extraordinary than pectoriloquism, is not the less a very characteristic and sufficient sign in practice, especially when it only exists at one side. It may be rendered still more striking, as we have said, by stopping the other ear.

The difference of the sound of the voice in the diseased and the other parts of the chest, becomes then so very great, that the certainty of an ulcerated cavity is as complete as if it were announced by the most perfect pectoriloquism. There cannot exist any doubt on this head, except when the phenomenon is less intense, and is observed equally on both sides of the chest.

When the pulmonary cavities are extremely large, pectoriloquism is changed into a phenomenon analogous to what is observed in men who have not a very low voice, and sometimes even in women whose voice is not very sharp. Thus when in a consumptive person, evident pectoriloquism comes to be changed into a stronger sound, analogous to the voice transmitted at a distance by a trumpet or paper cone, we may conclude that new tubercles have become softened, and that they have produced cavities opening into the first, and consequently that the disease is gaining ground.

The cylinder widened at its extremity in the shape of a funnel utters pectoriloquism less than the simple cone or tube, and affords nearly equal intensity of sound; for this reason it may sometimes be employed with advantage in subjects with a low and hollow voice. The author remarks, that he applied his ear upon the chest of a consumptive person who afforded the sign of pectoriloquism in the highest degree, and he only obtained the doubtful sign just described, and even with less intensity of sound than when he used the tube, and especially the cylinder, hollowed like a funnel. It is scarcely necessary to say that the full cylinder does not afford pectoriloquism. It produces, with a less intensity of sound, nearly the same effect as the immediate application of the ear. The cone cylinder gives a sensation more resembling the true pectoriloquism, without doubt owing to the multitude of small tubes of which it is composed.

The most evident pectoriloquism may present differences sufficiently remarkable and independent of the instrument employed. Sometimes the voice passes continually through the cylinder, sometimes the phenomenon is in some degree intermitting. This sort of intermission appears to be caused by the cavities opening into the bronchiæ being obstructed by phelgm or tubercular matter; but the diagnosis is not the less certain. Even perfect and continuous pectoriloquism is sometimes interrupted by this latter cause. Very often, after some hours, or even a few minutes, this phenomenon is not to be discovered in patients who have presented it in the most striking manner. The rattling (râle) which we then hear in the part where pectoriloquism existed, leaves no doubt concerning the cause of its cessation; for this reason, we ought never to pronounce that a phthisical person

does not afford this sign, until we have examined him many times, at different hours of the day, and particularly immediately after he has coughed.

It sometimes happened to the author, while examining consumptive persons, in whom pectoriloquism existed in the back, and whose voice was weak, that he heard their answers perfectly by means of the cylinder, whilst at the same distance, he could only hear a few interrupted expressions with the naked ear. Several other varieties of this phenomenon are detailed with much minuteness by the author, which every one desirous of perfecting himself in this new art should study diligently.

We have been so far minute, that we may do justice to our author's candour, in himself communicating so freely the difficulties and exceptions which may be urged against the general adoption of the method, by those who may consider it too laborious for common use. In making the experiment with the instrument used in exploration, the author always took care to turn the patient's head on the side opposite to that which he examined.

In more than 200 consumptive persons, dissection confirmed the accuracy of the prognosis which he had given by the aid of the cylinder, for in all of these he met with ulcerated cavities in the lungs, when he had previously found pectoriloquism in an evident manner; and as in the most part of these subjects he had observed the phenomenon in many points at once, he asserts boldly, that he has many hundred positive observations on this fact, and not one negative. On the other hand, he never found pulmonary excavations communicating with the bronchiæ, in any subject whom he had carefully examined in a regular manner for a certain number of days without meeting with pectoriloquism. Although the superior lobes of the lungs are the most usual seat of ulcerated cavities, we ought not to be satisfied with only examining the points above alluded, if pectoriloquism is not found there. It sometimes, though rarely happens, that cavities exist in the centre of the lungs at their anterior middle or lateral parts, and even towards their inferior edge, the superior lobes being altogether sound.

Two or three times only, cavities, more or less extensive, were found in subjects that gave no evident sign of pectoriloquism, but these cavities were almost entirely filled with softened tuberculous matter, and they only communicated with the bronchiæ by one or two openings situated in the posterior or inferior parts. These and other similar cases are no more than exceptions which confirm a general rule; for it is evident, that pectoriloquism cannot take place without the communication of a cavity, partly empty, with the bronchiæ.

From all his preceding remarks, the author concludes that pectoriloquism is a true pathagnomonic sign of phthisis pulmonalis, and that it is sometimes indicative of it long before any other could lead us to suspect it. In short, it is the only one that can be regarded as certain.

The following observations are certainly judicious, and confirmed by every day's experience.

Cough, dyspnæa, purulent expectoration, hectic fever, hæmoptysis, marasmus, are something met with in invalids, whom notwithstanding, and contrary to all expectation, we see restored to health. Some years ago, a young female died with all the symptoms of pulmonary consumption. On opening the body, the lungs were found entirely sound; but the liver was in the state commonly termed enlarged liver—there was no other organic injury.

On the other hand, we often observe in patients attacked with true tubercular consumption, the absence of almost all the symptoms which usually attend the disease. Sometimes the cough is absolutely wanting, or is interrupted for months; the hectic fever is often scarcely perceivable, and sometimes ceases for very long intervals. Even the emaciation, from which the Greek physicians took the name of the disorder, is sometimes scarcely to be observed, and death may happen by the sole progress of the tubercular affection. Lastly, in many cases, colloquitive diarrhœa is the only symptom, and therefore necessarily an equivocal one of the disease. M. Laennec states his conviction from a great number of facts, that in some rare cases, an invalid may be cured after having had tubercles in the lungs, which have been softened and have formed an ulcerated cavity.

To render the preceding observations more clear and intelligible, the author has subjoined a few cases to illustrate the facts which he has detailed.

The first presents the account of two pulmonary ulcers cured or transformed into fistulæ by the *developement* of a semi-cartilaginous membrane in a subject, who had no more tubercles in the lungs. The second case shews the same disposition in a subject who only had a small number of crude isolated tubercles, andsome miliary granulations, which from their state not being very advanced, and from the vigour of the individual, would not in all probability have prevented him from still living to a considerable age. The third is the history of a woman still living and in good health, who, after having exhibited a disease which presented all the symptoms of phthisis pulmonalis, remains after the cure a pectoriloquist, or one in whom that phenomenon may be discovered.

After considering the facts stated in the preceding cases, the form of pulmonary fistulæ, the smooth appearance and texture of the membrane which lines them, as well as the analogy of those phenomena which fistulæ in general afford, we should be naturally induced to think that the developement of the semi-cartilaginous membrane is the last effort which nature is able to make for the cure, after the formation of an ulcerated cavity in the pulmonary texture; and that it is impossible for the parictes or sides of a cavity so lined to be reunited by a true cicatrix. The fourth case appears, however, to prove the contrary. It is that of a semi-cartilaginous fistula of the lungs in part cicatrized, in a subject, who had other tubercles in different states of advancement, and another pulmonary fistula that was not cicatrized.

In commenting on this case, the author states, that the anatomical disposition which it indicated, seemed to be evidently the result of the approximation of the sides of an ulcerated cavity lined with a semi-cartilaginous membrane. But the union could not be completed, by reason of a small part of the tuberculous matter still remaining in the cavity. This case is, however, to be regarded as very rare, and is the only one which he ever met with; but he observes, it is not at all uncommon to find in different parts of the lungs, and especially the top of the superior lobe, a number of partitions or laminæ formed by condensed cellular texture, sometimes mixed with fibro-cartilaginous portions, whose whiteness forms a striking contrast with the texture of the lungs, presenting the appearance of a cicatrix imbedded in this texture.

The fifth case describes an old cellular cicatrix in the lungs of a man who died of chronic pleurisy and acute peritonitis; and the seventh contains the particulars of an old fibro-cartilaginous cicatrix in the lungs of a man who died of peripneumony.

M. Laennec states, that many observations lead him to think that tubercles of the lungs are not in all cases, a necessary and inevitable cause of death, and that after their *softening* has formed an ulcered cavity in the interior of the lungs, the cure may take place in two ways—either by the conversion of the ulcer into a fistula lined, with a membrane entirely resembling the texture of the sound animal economy—or by a more or less perfect cicatrix, and of a cellular fibro-cartilaginous, or semi-cartilaginous nature.

In alluding to the frequency of such examples of fistulæ and pulmonary cicatrices, the author remarks, "I can assure any one who shall devote himself with assiduity, to researches in

pathological anatomy in our hospital, that six months will not elapse, without his meeting with very many such cases."

The seventh observation is on a case of pulmonary consumption suspended in its progress, and to all appearance cured; and the eighth, is that of a young Englishman cured of tubercular phthisis. The ninth is a case somewhat similar.

M. Laennec has collected some judicious observations on the expectoration of tubercular matter, or vomicæ. These he thinks are not the usual consequences of peripneumonic inflammation, as many have supposed, but of the gradual developement and *softening* of pulmonary tubercles.

His researches in pathological anatomy led him also to discover a state of disease not much noticed by others, viz. dilatation of the bronchiæ.

In the few cases of the disease which occurred to him, and which always arose from chronic catarrh, or hooping-cough, he distinctly observed the phenomenon of pectoriloquism. Dilatation causing an unnatural cavity, he considers as the cause.

The limits within which we are obliged to confine this article, will not permit us to follow the author in his remarks on diseases of the heart, which are, however, extremely novel and ingenious. To many of our readers, the long detail we have already given will appear tedious. As we had a new system to describe, we thought it but justice to use as much as possible the author's own words. Such a manner of proceeding detracts, perhaps, from the style, but adds to the practical utility of the article. It is but fair, however, to apprize our readers, that the novelty of the subject, and the variety of interesting matter which M. Laennec has introduced, make it difficult to convey a just idea of the author's experimental labour and acute observation.

Models of the instruments which M. Laennec uses have been brought to London, and we lately saw sets of them at Mr. Weiss's, in the Strand. They are of so moderate a price, that it will be in the power of all to convince themselves of the reality of the phenomena observed by Laennec. This has already been done by several individuals, and we feel confident that very important results will, in all probability, be obtained from the experiments and observations now making.

ART. VI.—*Erfahrungen und Bemerkungen über die Amputation, von Dr. Herrmann Joseph Brünninghausen, Koniglich. Baierischen Medicinrathe, und Generalstabsarzte zu Würzburg, der k. k. medicinisch-chirurgischen Akademie zu Wien, der Gesellschaft der Wissenschaften und Künste zu Mainz, und der Physisch-medicinischen Gesellschaft zu Erlangen, Mitgleide, mit Kupfern.* 8vo. p. 111. Würxburg, 1818.

Experiments and Observations upon Amputation, by Dr. Herrmann Joseph Brünninghausen, Royal Bavarian Medical-Counsellor, and General Military Physician at Würzburg, Member of the Imperial Medico-chirurgical Academy at Vienna, of the Society of Arts at Mentz, and of the Physico-medical Society at Erlangen, with Plates. 8vo. pp. 111. 1818.

A LONG preface to a short treatise seldom preposses us much in favour of its author, particularly if ten pages of it be occupied, as in the present instance, to prove that amputation is an important operation, which has preserved many a brave fellow, whose life would else have been lost in the defence of his country. These might be very well to fill up the elegant pages of an inaugural dissertation, but in such a man as Dr. Brünninghausen, it requires all the novelty of his observations, and the extensive experience he has enjoyed as a military and hospital surgeon, to reconcile us to it.

"Nature, the handmaid of the healing art, first pointed out to the surgeon the possibility of saving life by amputation. From disease, or external injury, the whole of a limb, perhaps, fell into a state of mortification. By the powers of nature, a line of separation was formed between the living and the dead parts; the latter were entirely removed from the body, and the suppurating living surface was gradually cicatrized, and the patient restored to health, and the enjoyment of existence."

From this origin, Dr. Brünninghausen traces the successive improvements of the operation by the invention of the tourniquet, the employment of the ligature, and the saving of the soft parts to make a covering for the bone—subjects that have been so often described that we have found nothing to quote but the concluding observation of the writer, "that all changes are not for the better, and every alteration is not an improvement."

Under four different heads, this writer treats of the fixing of the integuments, the division of the soft parts, the separation of the periosteum from the bone, and tying the blood vessels. He disapproves of a very oblique incision through the soft parts, because the blood vessels when thus divided, cannot, for well

known physiological reasons, retract and diminish their calibre so completely, and are consequently liable to bleed more violently, and for a longer time than when divided directly across. "Even small muscular branches, which, cut transversely, would contract and close of themselves," he has seen, "furnish abundant hæmorrhage from having been divided obliquely; and hence the surgeon has been obliged to apply more ligatures than would otherwise have been required. Loder, a favourer of the oblique incision, was obliged to use nine, ten, and in one case, nineteen ligatures to stop the bleeding, after amputating below the knee; and Siebold applied fourteen ligatures upon a like occasion." These are, however, not very fair arguments, as there are other circumstances, besides the method of operating, to which an unusual number of arteries requiring ligatures upon the face of a stump, may be owing. In amputating a limb on account of an accident, we may judge pretty accurately of the situation and number of arteries that will require to be tied; but what judicious surgeon would attempt to form such an estimate, when the operation is called for to rid the patient of an enormous tumor, for the support and growth of which more blood must have been required, and a proportionate enlargement of the arteries produced. The author disapproves of making a pad of the muscles to cover the bones; their fibres, pressed upon the bone, are too sensible, and will make an irritable stump; and the muscles themselves, for want of use, waste and retract the integuments, forming a conical stump. In detaching the periosteum from the bone, he recommends it to be done upwards, by which half an inch of periosteum will be saved for covering the edges of the bone, and the muscular fibres will remain attached to this periosteum, which is of great advantage, in consequence of the edges of the divided bone being at first sharp. The medullary part of the divided bone will also be thus covered with a similar structure; and in amputation below the knee, it is of considerable importance that the sharp anterior edge of the tibia should not be immediately covered by the skin, but that the periosteum and cellular substance adhering to it, should intervene, preventing the disposition of this portion of the bone to exfoliate.

For taking up the arteries, Dr. Brünninghausen prefers the dissecting forceps, having recourse to the needle or tenaculum only where the artery cannot be separated from the surrounding parts. He has also described a very simple instrument to facilitate the exposure and tying of the artery; it consists of a flat piece of steel five inches long, each end of which is hollowed out in the form of a semicircle, so as to make two prongs. The

interspace between the prongs of the larger end is about three eighths of an inch, that of the smaller, one eighth of an inch—the one being used for small, the other for large arteries. When an artery is drawn out with the forceps, the surrounding parts may be pressed back with this instrument, facilitating the clean application of the ligature; and often, when the mouth of an artery cannot be seen, it may be made so distinct and prominent, by pressing down the neighbouring parts with this pronged instrument, as to admit of the ligature being applied without either forceps or tenaculum.

The author next relates *his* method of performing amputation. In removing the thigh, he compresses the artery upon the brim of the pelvis, with a pad having a long handle to it. In operating in other situations, he applies the tourniquet as usual. When the patient is very weak, and unable to bear the loss even of the smallest quantity of blood, he bandages the limb tightly with a flannel roller, beginning from below, and continuing upwards nearly as high as the place where the incision is to be made, so that the blood, which commonly, and more particularly after the tourniquet is tightened, would distend the veins, and which would be lost on the incision being made through the integuments, is driven to another part of the system, and remains to support the patient. He refers to an instance, where a feeble patient was sacrificed by the loss of blood in amputation of the arm, from this precaution having been neglected.

Having fixed upon the spot where the bone is to be divided, he puts a piece of adhesive plaister round the limb near that situation, an assistant steadying the parts by compressing them against the bone, without drawing them back. From the circumference of the limb he estimates the extent to which the integuments require to be saved for covering the bone; if the circumference of the limb be nine inches, the diameter of the stump will be three; and therefore the flap must be turned back somewhat more than an inch and half, allowance being made for the retraction of the parts. The incision of the muscles is to be made perpendicular to the bone, and the periosteum is to be separated from the bone on all sides, by pushing it upwards with as little injury as possible. The bone being cut through, and the vessels tied, we observe three distinct cylinders, the greatest of which is formed by the integuments, the middle one by the muscles, and the smallest by the bone; and when the parts are drawn forward, and we look at the face of the stump, we observe a hollow cone, the circumference of which is the skin, and the apex the bone. The following directions we shall translate strictly from the author.

" After the blood-vessels have been secured, a bandage is to be continued from the joint above to a level with the incision through the muscles, applying it not too tight, but just so as to give support to the lax integuments. The edges of the skin are to be approximated together, forming a transverse line, and either adjusted accurately to each other by sticking-plaister, (the ligatures being brought out at one of the angles,) or, in certain cases which are already explained, a fold of lint is to be interposed between the edges of the integuments, and the plaister and bandage applied over it.

" The placing of lint between the edges of the wound will clearly, in some measure, prevent its healing by the first intention, but this has no bad consequence; for what advantage is it to have the external edges united, whilst the internal part is disunited? when this is the case, the wound must, sooner or later, break out again. It appears to me not to be expected, that the whole wound of a stump, however accurately adjusted, should heal by the first intention, even when the ligatures have been cut close to the knot; if, on the contrary, you keep open the edges of the wound with a small quantity of lint, the inflammation will not be much increased by it, and a moderate degree of inflammation is advantageous, as the arteries thereby become more firmly closed and obliterated.

" By thus allowing the external wound to be a little open, the union of the inner wound where it can take place will not be interrupted, the ligatures have time to separate, and can be extracted with certainty; the parts of the wound which cannot immediately unite will be cleaned by a moderate suppuration and by granulation, and when the whole wound is clean, the skin which has been preserved will soon adhere at all points, and we obtain a firm cicatrix in about three weeks, as well as if we had attempted union by the first intention, which never entirely succeeds, but is commonly interrupted and deferred by partial suppuration.

" The principal intention in the method of operating with the flap is to spare as much skin as is required to cover the wound; muscles are not necessary for that purpose, and the advantages which might be expected from them is counterbalanced by such inconveniencies, that we ought to abandon it as soon as a more simple method is discovered.

" The saving of muscle and periosteum is only done with a view of being able to cover the sharp edges of the bone with them, and the exposed medullary surface is to be covered with skin and cellular substance.

" This method of amputating has one fault, which first explains itself in the cure, and often defers it very much, viz.

that when the integuments are brought together so that the wound makes a transverse line, the two angles form two projections; and at these angles the adjustment is not complete, because the skin is superabundant. During the suppuration which follows, these two angles become round, and in consequence of that form, even when the other part of the wound is healed, the cicatrization cannot take place in those angles until the skin falls into folds. Kirkland had observed that circumstance, and had therefore given advice to divide the skin in these two angles. But it answers little purpose; I have tried it, and found that too much skin always remained. In order to prevent this difficulty, we may cut out, on each side, a triangular piece of the superfluous skin, or what answers better, we may make the incision in the following manner, by which we form two semi-lunar flaps for closing the stump.

"Take two semi-lunar pieces of paper, each large enough to circumscribe nearly two-thirds of the limb to be amputated. When the place where the bone is to be sawed through has been determined by a strap of adhesive plaister put round the limb, and when we have judged how much integument will be required to cover the wound, we apply one of the semi-lunar pieces of paper to the limb. Supposing three inches of integument require to be saved, the paper is to be extended an inch and a half below the plaister. The other piece of paper is to be applied on the opposite side of the limb, reaching to the same extent below the plaister. The papers are then fixed by a bandage, and firmly pressed by an assistant, till the whole of their convex border is closely applied to the skin, so that they cannot be displaced from their situation when the knife is employed. The form of the incision is thus indicated, although not to mathematical nicety, because it is always necessary to allow something for the elasticity of the skin. We now apply the point of a scalpel, with a slightly convex edge, to the external angle where the two papers are in contact, and cut through the skin along the convex border of the lower paper to the inner angle; and from the inner angle we continue the incision in one stroke along the convex edge of the upper paper to the outer angle. The two pieces of paper are now to be taken away, and the flaps with the cellular substance are to be dissected from the parts beneath, as far back as the circular strap of plaister, the assistant taking care not to allow the skin to retract. The two semi-lunar flaps of integument are now turned back and retained by an assistant, whilst the muscles are cut through by a perpendicular incision.

"In amputation below the knee, it will be right to make

the semi-lunar flaps unequal, the posterior flap being a little longer than the anterior, because there is a greater surface to be covered by the former than by the latter, which has only to cover the tibia.

"After the bones are sawed through, the vessels secured, and the soft parts approximated and supported by the bandage, the ends of the ligatures are not to be brought out at the angles of the wound, but left with a little lint in the middle of the wound; the adhesive plaisters and common dressings being applied as usual."

These, and a few more details upon the form of the instruments for amputation, are the principal materials of Dr. Brüninghausen's pamphlet; and it may fairly be questioned, whether the matter to be communicated was worthy of being put forth as a separate publication.

Art. VII. *Recherches sur les véritables Causes des Maladies Epidémiques appelées Typhus, ou de la Non-contagion des Maladies Typhoides; par M. Lassis, Docteur en Médecine de la Faculté de Paris, Ancien Médicin en Chef de l'Hôpital de Nemours, Membre Correspondant de la Société de la Faculte de Médecine de Paris, et de la Société Mineralogique d'Jena.* 8vo. Paris, 1819.

The circumstances attending epidemic and pestilential diseases are so striking, and the consequences so serious, that they could hardly fail to arrest the attention of the most careless observer, in whatever age or clime they may have occurred. We accordingly find, that they have been noticed from the earliest ages of which history affords us any account.

In ancient times, they, like other remarkable events which could not be explained, were, by the many, attributed to the direct operation of supernatural powers, or to the influence of the heavenly bodies. We, however, learn from historical records, that the more enlightened of those professing the healing art, from Hippocrates downwards, attempted to assign, and did assign a cause for such destructive diseases. It is evident that most of them attributed their origin to impurity of the air; an opinion to which they would naturally be led by a great variety of those circumstances under which they were placed in life: for man could not reside long in inclosed habitations, without observing the noxious changes produced on the air which he breathed, if at any time the free ingress of air from without was pre-

vented; and that, even independent of this exclusion, many circumstances had the effect of rendering it offensive. Such vitiations became evident to the senses, and no long period could elapse without examples of actual disorder forcing themselves upon notice, arising from this cause alone.

With these facts before their eyes, we imagine it was very natural for such intelligent and careful observers as those alluded to, to search for the origin of such maladies in a deteriorated atmosphere, especially when they observed, as they must have done, that great numbers were affected about the same time.

It has, however, long been a matter of controversy amongst modern physicians, whether the ancients were acquainted with contagion or not. We have not room, nor if we had, do we feel disposed to enter into any minute or elaborate discussion of this question; yet we cannot forbear venturing a few remarks on what, to say the least of it, must be regarded as a curious subject, and one very far from being destitute of interest to the more intelligent part of our profession.

Hippocrates, when speaking of the propagation of epidemic diseases, adds,—"Communis ergo febris (pestis) propterea omnibus accidit, quod eundem spiritum omnes adtrahunt, fitque ut simili corpori similes spiritus similiter permixti, similes gignant febres."* In another place he observes, "quum multi homines uno morbo corripiuntur eodem tempore, in id quod maximè commune est, quoque omnes utimur, potissimum rejicienda causa est. Id autem est, quod inspirando trahimus. Quod enim vivendi ratio cujusque nostrum in causa non sit, jam liquido constat, quum morbus omnes continenter attingat, juvenes et senes, et mulieres et viros, perindeque temulentos et abstemios, tam eos, qui maza, quam qui pane, vescuntur, et eos, qui multis quam qui paucis, exercitationibus utuntur. Non igitur victus rationi assignanda causa est, quum cujusvis generis victu utentes eodum mobo corripiuntur."†

From this passage it is clear that Hippocrates, though well aware of the influence of the "*ratio vivendi,*" in co-operating to produce those diseases, yet with that judgment which made him so conspicuous in the age in which he lived, and which will never fail to excite the wonder and admiration of the latest posterity, concluded that it could not constitute the sole cause of an epidemic, since, when it did prevail, it assailed indiscriminately the old and the young of both sexes, the abstemious, and those who lived luxuriously.

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*. Hippocrates de Flatibus. † Hip. de Natur. Homin.

Innumerable passages might be quoted from the same author, to prove that he thought the latent cause of those fevers existed in the air inhaled into the lungs; but whether his το θειον was regarded by him as the only cause giving rise to them, and the sole agent concerned in their propagation, independent of any thing equivalent to what we understand by contagion, is not so easily determined; for he observes, "Ubi vero morbus aliquis populariter grassatus fuerit, non victus rationem in causa esse, sed quod spirando ducimus, manifestum est, *illudque morbosam quandam excretionem plane obtinere;*"* consequently proceeds to recommend, "ut aëris quam minimum in corpus influat, *isque ut maxime peregrinus sit, providendum, regionum loca, in quibus morbus consistit quoad fieri poterit, permutando.*"

Galen, when treating of epidemics, says, "neque enim certi est morbi nomen vulgare vel pestilens; cæterum quicumque morbus uno in loco multos simul invaserit, vulgaris hic vocatur: qui simul si hoc habeat ut multos perimat, pestis fit."† And again, "aliis enim causis neque simul omnes occurrimus, neque diem integrum subjicimur; sed *aër solus foris omnes ambit*, atque ab omnibus inspiratur."‡ In another place he most distinctly tells us, that he considers excessive heat, and a putrid state of the air, the chief cause of those fevers. Avicenna says nothing at all concerning contagion, and Aristotle writes thus: "Pestem non alia ratione asserit contagiosam, quam quod a causa communi, aëre videlicet, ortum ducat."‖

Those who advocate the supposition, that contagion was well known to the ancients, have laid great stress on the history given us by Thucydides, of the epidemic that raged, and made such havoc at Athens, above 400 years before Christ. He certainly speaks of contagion, but whether in the same sense as we are in the habit of employing the term at the present day, is very doubtful; for he tells us that the physicians were as ignorant of the cause as of the appropriate treatment of the distemper: he also adds, that some attributed it to the enemy having poisoned the springs that supplied the Athenians with water, and concludes his account by declaring that he leaves it to others more able than himself to discover the true cause. Neither must it be forgotten, that Athens was at the time subjected to all the evils attending a war, which in the event proved most calamitous to

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* Hippocrat. de Natur. Homin.

† Galen. Com. III. in Lib. de Morb. Vulgar. Hipp.

‡ Galen. Comment. I. in Lib. I. Epidem.

‖ Probl. Sect. I. § VII.

them. All commerce had been put a stop to, and consequently many privations were to be endured: and it must also be remembered, that by the command of Pericles, who afterwards fell himself a victim to the disorder, the whole of the people of the surrounding country, whose habitations and property were laid waste by the Lacedemonians, had been shut up within the walls of the city. Under such aggravated circumstances, it ought not to be a matter of surprise to us, that famine and pestilence were the result.

Another fact, also favourable to the opinion of the disease not having been contagious, in the strict sense of the word, is, that it never was carried into the Peloponnesus, notwithstanding the incursions of the naval army of the Athenians, many of whom had caught the distemper, nor did it spread to the army of Archidamus, though it remained a considerable time in Attica.

These few observations, though superficial, may, we think, suffice to shew, that it is at least very uncertain whether the ancients did attach any such idea to contagion, as we do, or not. If it be true that Virgil speaks of the "pecoris contagia," the poets of those times had also their "contagium lucri;" and in fine, we are compelled to acknowledge, that unless biased by preconceived opinion, we cannot imagine any one, after a fair comparison of the evidence on both sides, coming to a conclusion in the affirmative; for it really appears altogether inconsistent with what we know of the accuracy of observation and minuteness of detail, for which the ancient writers are so conspicuous, to suppose that they could have treated the important subject of contagion so slightly, and spoken of it in terms so equivocal, had they been acquainted with it; and it is but reasonable to suppose, that if they had been aware of its existence, its great importance must have been obvious to them, and could not have failed to command their keenest attention.

Dr. Yeates lately published an article to be found in Brande's Journal, in which he attempts to prove that contagion was well known to the ancients, and perfectly understood amongst them. The passages he adduces, both from the ancient physicians and poets, are certainly very forcible; yet with deference to that learned physician, we cannot admit a few isolated passages sufficient to decide such a question, for reasons already stated, and we shall conclude these few remarks on the subject, with the opinion of Heurnius:—"Non facile invenias nomen contagii apud antiquos auctores physicos et medicos. . ..apud historicos et poetas invenias contagium, contagem, contagionem et *contactum:* nullus tamen veterum scripsit quid illud sit."*

* De Peste.

It would appear, that it was not till about the middle of the tenth century, that the attention of the medical world was particularly directed to the subject of contagion. Fracastorius, an Italian physician, is supposed to have been the first who wrote expressly in favour of the doctrine. According to Dr. Maclean, this writer was made the tool of Pope Paul III., and he contends that it was all a mere trick played off by the Holy Father, in order to have the famous Council of Trent translated to Bologna. This, however, even from the doctor's own account, appears to be incorrect; for, in a passage which we shall to quote from his work, he admits that it was known at a period antecedent to that event. He says, "By an ordinance of the police of Paris, dated the 16th September, 1533, I find, that although houses in which persons were affected with plague, were directed to be marked with a red cross, and persons coming out of them to carry a white wand in their hand; yet the houses were not called *infected;* no apprehension appeared to be entertained of the disease being propagated from one person to another: nor was the word *contagion* once used."*

From some time about the above mentioned period the doctrine of contagion continued to be promulgated and distinctly taught, so that, notwithstanding it met with slight opposition occasionally, it at length became universally established.

It is unnecessary in this place to say any thing of the discordant opinions of different writers respecting yellow fever and the plague. On the subject of the former, many respectable men maintain that it is contagious, whilst very many argue for its being non-contagious; and, perhaps, the evidence as it now stands, is in favour of the latter opinion. With respect to the plague, however, although some contend for its being non-contagious, we do not hesitate to pronounce the evidence to be very much in favour of those of the opposite way of thinking, at present. The gentleman we have just had occasion to allude to, Dr. Maclean, is a most strenuous advocate for its not being contagious, and says, very modestly—

> "I have so proved it,
> That the probation bears no hinge, nor loop,
> To hang a doubt on."

We cannot, however, regard this work as by any means calculated to make converts; but it affords us a striking example of the ready facility with which an ingenious man can surmount every obstacle opposed to his favorite doctrine, and of the

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* Vol. I. Page 168.

happy manner he has of seeing facts in the light that best suits his own purpose.

M. Lassis, the author of the work now before us, is an army-physician, and consequently has collected the principal part of his information in the active exercise of his profession during the French campaigns on the continent. The object of this undertaking is to prove the non-contagious nature of those epidemics which have come under the denomination of typhus.

In our third number, we endeavoured to shew that the original import of the term typhus had been in a great measure lost sight of, and that it was used by far too indiscriminately. Instead of its being applied exclusively to those fevers characterized particularly by stupor, many appear to comprehend under the title of typhus, all such as are accompanied by any remarkable degree of depression of nervous energy. Nor does M. Lassis convey to us any more precise knowledge of what he means by those epidemics called typhus, than that the diseases of which he speaks were epidemic; for, in one part of this work, we are not a little surprised and perplexed to find the following remark:—"On ne voit rien, en effet, dans les maladies epidémiques appellées typhus, qui ne soit relatif aux causes evidentes qui les accompagnent constamment, et qui ne ressemble à ce qui se présente, du moins de temps en temps, dans des fièvres ordinaires, appellées putrides ou adynamiques, malignes ou ataxiques, *et ou généralement on ne soupçonne rien de contagieux.*"

We, however, hasten to offer a general view of the work, as presented to us.

M. Lassis divides that part of his work, which more strictly concerns the object he has in view, into five chapters. In chapter I. he considers the question—"La contagion dans les typhus, est-elle prouvée?" He introduces the discussion with the following quotation from Pliny:—"Majorem fidem homines adhibent iis quæ non intelligunt," which may serve to convey a pretty accurate idea of the importance he attaches to such as presume to differ with him in opinion. He then proceeds to give a superficial sketch of the opinions of some of the ancients, in order to disprove their having had any knowledge of such a thing as contagion, in the present acceptation of the word. He maintains, that till about the middle of the sixteenth century, no one entertained such an opinion, Fracastorius being the first person that wrote positively and expressly in favour of it; that the lazaretto founded at Venice about the same period, was the first establishment of the kind; and that quarantine is a usage of very recent date.

From the abovementioned date, the doctrine, he says, was seized with avidity, and rapidly gained credit from its affording a ready excuse for not being at the pains of inquiring into the true causes of the disease—an inquiry oftentimes not unattended with difficulty, and from its offering a veil to screen their ignorance of the means proper to oppose its progress.

He next proceeds to combat the facts, or supposed facts, upon which the belief in contagion is founded; which, according to him, are the following:—

1. The contagious nature of many other disorders.
2. The pretended contagion among the lower animals, in diseases of the same nature as those affecting the human species.
3. The effect of separation.
4. The germ of contagion pretended to be preserved in some substance during many years, and supposed capable of developing itself after that time.
5. The germ of contagion pretended to be attached to a sound person, and supposed capable of developing itself after a longer or shorter period.
6. The progress of the epidemic, particularly amongst those who have frequent communication with the sick.
7. The severity of the symptoms.

M. Lassis takes up each of these arguments individually, but as none of them except the 6th, appear to us of much importance, let us see how he treats it.

"Si, en second lieu, parce que les typhus regnent surtout parmi les personnes qui ont entre elles le plus de relations, on pouvait leur accorder le caractère contagieux, on pourrait reconnaitre également ce caractère dans certaines maladies, où peu de médecins ont osé l'admettre, telles que l'opthalmie, les affections catarrhales, les fièvres intermittentes, et les fièvres continues les plus benignes et les plus ordinaires; car ces maladies regnent aussi principalement parmi les personnes entre lesquelles il y a le plus de communication."

It is extraordinary that an individual who sits down and writes upwards of three hundred pages, for the express purpose of proving the non-existence of contagion in typhus, should thus meet the very augmentum crucis of his adversaries. M. Lassis has given us in the body of this work abundant proofs of extensive reading; is it then probable, we ask, that during his researches, he could be so unfortunate as never to meet with any striking instances of infection having been conveyed from an individual labouring under fever to another, although at a time when both were far removed from any known source of the disease? Did he never hear of nurses having caught the disorder, when under circumstances apparently the most favour-

able? Did he never know fever spread to patients labouring under other diseases, in an hospital, when there were several of the infected in the same room, but where no one would have thought of fever originating, had the patients even been more numerous, but not labouring under fever?

M. Lassis then proceeds in his second chapter to discuss the question—"Le système de la contagion est-il vraisemblable?" The first evidence against it, according to M. Lassis, is the very existence of the human race; for, says he—

"Ces maladies étant susceptibles de récidive, quelque nombreuses qu'aient été de premiers attaques, si elles étaient contagieuses, si leurs germes se multipliaient, se repandaient, et se conservaient comme on le pretend, il y a long temps que tous les hommes auraient succombé à leurs attaques reiterées. Mais dans tous les lieux où des typhus ont regné, on a vu survivre un grand nombre de personnes qui en ont été atteintes, on a vu même la plus grande partie des autres habitans en être exempts, malgré les plus fréquentes communications," &c.

To all this, however, there is a ready answer. We often find measles, small-pox, and scarlatina, prevailing at certain times throughout the year, and continuing to spread for some time, and then gradually ceasing, without any very obvious or assignable cause. We meet with innumerable instances of individuals exposed to them by uninterrupted communication with the sick, and who escape, notwithstanding we had every reason to apprehend from their age or other circumstances, that they would take the disease. May not the germ of small-pox be retained for some time in bed-linen, and so give rise to the disease in another person? M. Lassis does not deny the contagious nature of the diseases we have mentioned, and we regard his mode of reasoning equally applicable to the one case as to the other. Besides, supposing the disease to be contagious, we cannot see any thing more extraordinary that certain individuals should escape, than if we were to take it for granted that it arose from such causes only as are insisted on by M. Lassis. If a power inherent in some constitutions can counteract the operation of unwholesome air, and such like causes of disease, why, we ask, may not a similar power resist the impression supposed to be made on the nervous system by contagion?

The next argument that he brings forward against the probability of infection by contagion, is his belief that epidemic typhus only depends upon causes that are evident; and, by way of example, adduces a well supported fact, that if at any time an army is threatened with an epidemic in any of the unhealthy latitudes of Africa or America, the means of escaping is a

change of situation. In confirmation of this he quotes the authority of Desgenettes, Baron Larrey, Assalini and others; and adds—

"Suivant les observations multipliées de different voyageurs, qûe, dans les ports de l'Egypte, par exemple, il arrive des bâtiments dont les équipages soient atteints du typhus oriental; que ces équipages aient avec les habitants les plus grandes communications; si c'est à l'époque ou l'eau du Nil coule avec rapidité dans son propre lit et dans ses nombreux canaux; si les vents étésiens ont succédé aux vents délétères du midi, alors la maladie, quoique dans le lieu où elle paraît aujourd'hui avoir principalement établi son empire, se borne uniquement anx individus qui composent cet équipage; et même s'ils se rendent à terre, non-seulement ils ne communiquent pas leur maladie, mais elle se dissipe en peu de temp. Mais si les canaux sont remplis d'eaux stagnantes, verdâtres et infectées; si l'eau du Nil lui-même, dont le cours est ralenti pendant les trois quarts de l'année, a contracté ces mauvaises qualités; si les vents du midi, surtout ceux de Kampsin, regnent, dans ce cas, que des équipages atteints de typhus arrivent ou non, cette maladie ne manque jamais de se développer et de se répandre plus ou moins."

The rest of his objections are deduced from the circumstance of a temporary communication with the sick proving insufficient to excite the disease in another person, from the difficulty of accounting for the commencement and cessation of the epidemic on the supposition of contagion, and from the experiments of M. Desgenettes, who inoculated himself in two different places, the groin and axilla, with the matter taken from a plague bubo. He, however, does not make the slightest allusion to the intrepid but less fortunate Dr. White, nor to the fate of Dr. Rosenfeldt, but tells us that Dr. Assalini received on his hand the matter of a bubo which he opened, without experiencing any untoward consequence.

In Chapter III. M. Lassis tells us that the doctrine of contagion is not admissible, since "elle ne prouve rien, n'explique rien, ne rend raison de rien." And in Chapter IV. he maintains that the fevers under consideration differ in nothing, except in degree, from others, where contagion is not even suspected. The fevers here alluded to as not being so much as suspected to be contagious, he calls putrid or malignant; but as we do not pretend to understand exactly what meaning he wishes to convey by such terms, we must confess ourselves incompetent to estimate the force of his arguments in this particular.

The eighth and last chapter of this work is by far the most important, and together with the Appendix, renders a considerable share of merit due to M. Lassis, for the great pains he

has taken to make himself acquainted with, and to point out to others, the many evils that have resulted (we do not think altogether necessarily), from a belief in the doctrine of contagion. These he discusses under the three following heads:—1st. The ignorance of the true, or at least, of the principal causes of the epidemic. 2d. The privations to which the sick are subjected, from the want of proper aid, and the employment of pretended antidotes more or less pernicious. 3d. The tenor and regulations of police arising from the notion of contagion, which, instead of tending to arrest the progress of the disease, have quite an opposite tendency.

Although the doctrine of contagion may have had the effect of diverting the attention from other important and co-operating causes, and may probably continue to do so on many parts of the continent to this day, we are firmly persuaded that no physician in this country would run the risk of such an imputation; for whether contagionist or non-contagionist, he is taught, and is well aware of, the great influence of other circumstances, as well in producing those diseases, as in aggravating them when once they have made their appearance—whether it regards an unhealthy situation, bad ventilation, crowded apartments, or bad living; these seldom, we may say never, escape his most serious attention. M. Lassis has bestowed great labour to prove the existence of those causes in every epidemic, but we can and do believe all this, without conceiving ourselves under the necessity of renouncing our belief of contagion. As well might we deny the contagious nature of itch, because we, for the most part, find it originating and spreading where filth and penury prevail. We are aware of the difference of the two cases, but such reasoning is as applicable to the one as to the other.

He next points out some of the means that have been employed as antidotes, to the utter neglect of rational inquiry.

"On a eu recours," says he, "même aux substances les plus propres à exciter le degoût. Les matières fécales elles-mêmes, appelées par plusieurs auteurs *civette* occidentale ne sont pas, a-t-on dit, moins estimables, ni moins estimées que l'urine dans la cure des maladies contagieuses. On a décrit avec beaucoup de soin la manière de prendre ce précieux medicament, et on a felicité l'homme de porter ainsi en lui-même un pareil antidote."—"On a parlé du son des cloches, du bruit du canon, et de feux allumés dans les rues et les places publiques. On a prétendu qu'en se tenant constamment auprès du feu, on ne serait jamais atteint de la maladie." "On a conseillé de n'ouvrir ni portes ni fenêtres, si ce n'est une heure ou deux apres le lever du soleil, et de fermer les unes et les autres au moins une heure avant la nuit, on a parlé de condamner même l'ouverture des cheminées."—"Nous n'au-

rions par cru devoir parler de tels conseils, si nous ne les eussions vus nous-mêmes exécutés en 1814 et en 1815 pour des vaches, à la maladie et à la mortalité des-quelles ils contribuèrent beaucouf.

"La fumée, les odeurs, quelles qu'elles soient, out été regardées comme le meilleur moyen d'arrêter les progrès du mal. On a pretendu, qu'il serait très avantageux, par example, de répandre dans les rucs, les basses-cours et les jardins du fumier et des excrements et de les remuer soir et matin ; on a blamé Hesiode qui défend le fumage desterres par ce moyen. On a sur-tout récommandé de faire tuer le plus d'animaux possible et de les disperser également dans les rues et les grands chemins, pour les y laisser pourrir.

"Quelque extravagantes que paraîssent ces idées clls ont été approuvées par des médecins d'une assez grande autorité, comme Alêxander Benoit, de Verone, parmi les médecins de ces derniers tems. Sydenham, appelé l'Hippocrate Anglais, Sydenham lui même prescrit de récouvrir la tête des malades avec leur draps, pour arrêter les vapeurs qui sortent de leur corps."

He goes on to condemn every species of fumigation ; for, says he,—

"Quelques moyens qu'on emploie, parviendra-t-on jamais à composer un air aussi pur, aussi salubre que celui-qui nous est offert par les mains du Createur ? Peut-ou se flatter d'établir cette proportion, si juste et en même temps si necessaire, d'oxygene et d'azot qui, avec un peu de gas acide carbonique, constitue l'air atmospherique ? C'est ce que personne n'oserait avancer."

We agree with M. Lassis, that no one pretends to such a power, for which reason we think he ought not to have taken it for granted that they imagined their fumigations to act by regulating the proportion of the natural constituents of the surrounding air. But so great is M. Lassis' aversion to contagion, that he appears to dislike the very name ; so that, instead of being told the common opinion, that the product of the fumigating mixture combines with, and destroys the contagion, we have the above question put us.

No sooner had the doctrine of contagion become established, than it suggested measures the most rigorous, and laws were made and put in force, inflicting the penalty of death on those who dared to deviate from them ; but more especially on such as neglected to separate themselves entirely from the sick. Our author introduces the consideration of the evils resulting from such a mode of procedure, by enumerating the regulations of police, as related by Papon in his work on the plague, and which we deem not unworthy of being transcribed in this place. They are as follows :—

1. During an epidemic, supposed to be contagious, the inhabiants of those districts in the vicinity of the place where it has

manifested itself, ought to be separated from them by a cordon of troops.

2. A double wooden fence ought to be constructed, to separate the inhabitants of the city in which the epidemic prevails, from those of the parts adjacent.

3. The proper officers ought to take care that strangers have their heads and other parts of their bodies shaved; they are then to be washed three times with good vinegar; after which they may give them clothes, but subject them to a quarantine of ten days.

4. Neither strangers, nor even the nearest relations, ought to be allowed to visit, without permission, on pain of seeing their houses burnt.

5. All the cities, towns, and villages situated within ten leagues, ought to keep a strict watch, to prevent all communication.

6. The inhabitants of any house in which the disease has made its appearance, ought to be confined; the sick transported to an hospital, or to some habitation without the city; the house in which the disease commenced shut up, and the furniture burnt. It ought to be publicly proclaimed that a contagious disease has manifested itself; and that such inhabitants as wish to quit the town, may take their effects with them; at the same time recommending them to do so as soon as possible, and compelling the neighbouring towns and villages to receive the fugitives.

7. A depôt of vinegar, perfumes and lime, for daily use, ought to be established in each quarter of the city.

8. There ought to be a board of health, having the power of life and death over those who shall violate any of the regulations. In particular, a railing ought to be placed between the public and those employed about the sick, with whom it may be necessary to hold correspondence. The same ought to be constructed before the shops of tradesmen. As soon as any one falls sick, the other persons residing in the house shall give notice thereof to the officer of that district, or to the board of health, and all retire to a separate place, except the individual destined to wait on the patient; and he shall have no communication with the rest. The house shall be declared suspected, and shall have a sign on he door to that effect, in order that passengers may be warned to keep at a proper distance.

9. Those who visit the sick, as the physicians, surgeons, &c. shall wear a badge of *suspected*, that persons may not incautiously approach them.

10. In a city where the disease is proclaimed, it shall be publicly announced, two days after such notice has been given, that

all who go out of their houses without permission, shall be tried by military law.

11. No one shall enter the apartments of the sick, except he have on a dress made of wax-cloth, and gloves of the same material.

12. The whole of the family, together with the servants, of a sick person who may think proper to remain in his own house, being justly considered suspected, shall in consequence be expelled from society.

M. Lassis deprecates, in very strong terms, a system which, according to him, has only the effect of adding innumerable evils to the one already existing; and maintains with great warmth, that by thus placing a town as in a state of siege, and exposing it to all the miseries and inconveniences attending upon such a situation—by exciting terror in the minds of all its inhabitants—by violating all the laws of civilized society—by forcibly tearing asunder individuals bound together by the strongest ties—by producing despair in such as are thus abandoned by those most dear to them, and by the affliction of the latter at being compelled to act so unnaturally, incalculable mischief is produced. In short, that the whole of the measures enjoined by the police, are only calculated to swell the list of sufferers. He adds—

" Si les Egyptiens redoutent celle à laquelle ils sont sujets chaque année, leur crainte n'est pas marquée par les mêmes précautions que celles que nous prenons; elle ne les éloigne pas des personnes atteintes de l'epidémie: on rend aux malades les visites qu'exigent l'humanité et la religion; leur maison n'est point suspecté; si quelques uns succombent, leurs hardes se vendent sans distinction; et cette indolence, cette securité ne rédouble point les ravages, au contraire, elle semble les diminuer. Parmi nous, à peine de sept malades s'en sauve-t-il un; chez les Turcs, il n'en périt pas un si grand nombre."

This he states on the authority of Senac, who wrote on the plague; and, in confirmation of the pernicious tendency of the doctrine of contagion, he brings forward the testimony of another respectable physician:—

" Le docteur Pugnet a remarqué combien il est cruel pour un malade de se voir brusquement enlevé à tout ce qu'il connait ou lui est cher. Il dit que pendant l'expédition d'Egypte, c'était peut-être parceque les Turcs sont exempts de crainte, à l'égard de la pretendue contagion de la peste, qu'ils échappaient à ce fleau, tandis que parmi les Français, il exerçait des grands ravages. Quel pénible spectacle s'ecrie-t-il, nous offrait un malade qui recourait à nous pour l'éclairer sur son état! A la crainte de la maladie se joignait, la crainte d'être renfermé dans les lazarets, l'ordre de s'y rendre, ou d'y être transferé,

paraissait un arret du mort. On ne le voyait jamais y entrer sans demeler chez lui une vive emotion, à laquelle succedait bientot l'alteration de toutes ses facultés intellectuelles. Ce docteur termine ses remarques, en citant l'exemple d'une personne chez qui tout annonçait une guérison prochaine, et qu'une vive affection de l'âme fit succomber très promptement."

It is impossible to deny the force and truth of the arguments made use of by M. Lassis, and every one must acknowledge that such evils as are pointed out by him, do really result from the measures enforced by the police; yet, supposing the disease to be contagious, we can only regard the whole as the least of two previous evils; far better, we think, adopt measures that may inconvenience and even prove injurious to a few than risk the lives of the community at large. And in the case of the plague in particular we do not *yet* entertain the least doubt of the propriety of the most strict measures that can be adopted.

We now pass on to his examination of those situations in which the plague has been recorded to have prevailed, and where it still continues frequently to occur.

The seat of the plague has not always been the same; it has prevailed in an especial manner in those places where powerful evident causes have been known to exist, altogether independent of any communication between such places, and those parts from whence, since the sixteenth century, it has been supposed to be conveyed; neither has it ever occurred in any place where those evident causes did not exist. It not unfrequently prevailed at Rome, at a time when that city had absolutely no communication whatever with the east. At that period, the darkness of barbarism overspread the whole of Europe. Agriculture was neglected, particularly in the Roman territories. It abounded with stagnant waters and marshes, there was almost perpetual war, carried on with the most frightful rapacity and devastation, whilst the arts and sciences were flourishing in Greece, in Egypt, and in Persia. These latter countries were regarded at that time extremely healthy, and in effect they were very populous. Herodotus, Diodorus, Siculus, and other historians have told us that Egypt in particular enjoyed that advantage. If in those remote times, the plague did occasionally visit them, it was much less frequent than at present. The state of things is now very different; the arts and the sciences, banished from those fine countries, have been cherished and cultivated in the west; and pestilential diseases have in like manner changed their seat. They have become much more frequent and permanent in the east, and more rare as well as more transitory in the west.

These changes were slowly brought about; it was not till the reign of the Medicis, that the sciences, banished from Greece by the Turks, after the conquest of Constantinople, found refuge in Italy; and it was some years after that event, under Francis I., before they reached France. Their cultivation soon led to the removal of many of those causes that tend to render a country unhealthy; but civil and foreign wars continued for a long time to afford sources of pestilence, and to throw impediments in the way of those improvements which the nature of the country demanded.

Papon, in his History of the Plague, informs us, that till the time of Louis XIV. measures were not taken to render the soil of France less unwholesome; and observes, that the plague has not been known to prevail in that country but once since the year 1666, comprehending an era in which agriculture and the arts and sciences have made the greatest progress.

Whilst in Europe, civilization was making daily advances, whilst proper means were every where had recourse to, to render each country more healthy, and wars became attended with less disastrous consequences, changes directly opposite were effected in the east. Those expedients which they had with great labour formerly made use of to procure a wholesome atmosphere were abandoned; and, in consequence of being so neglected, became themselves an additional source of insalubrity. This is the case, for example, in Egypt, where the sluices destined for the reflux of the waters of the Nile, which are still at this time very numerous, are, during a part of the year, only receptacles for stagnating water and innumerable insects, especially during the three months immediately preceding the inundation.

"L'Egypte," says Papon, "sous la domination des musulmans, a éprouvé dans le sol et dans le climat, les mêmes altérations que l'Europe éprouva après la chute de l'empire d'occident, avec cette différence, que les Européens ont réparé par leurs lumières et leur industrie, les ravages du temps et de la barbarie, au lieu que les Egyptiens ont laissé périr les travaux immenses qu'avaient faits leurs rois pour la prospérité et la salubrité du pays. La plupart des réservoirs et des canaux se sont comblés et n'offrent que des cloaques infectés. Une grande partie de l'Egypte cesse de recevoir les eaux du Nil, s'est couverte d'insectes et de reptiles vénieux, et s'est pénétrée d'un vénin pestilentiel."

Dr. Pouqueville, in his work, "De Peste Orientale," speaks nearly to the same effect; for, says he—

"Herodotis antiquissimi scriptorum ætate, Ægyptus salubritate

gaudebat, civitates opulentissimæ undique assurgebant, uundique plebs innumerabilis terram uberrimam incolebat. Sed cùm barbari institutionum optimarum, legumque contemptores, has regiones invasissent, tunc monumenta et oppida cecidêre, tunc cultura neglecta fuit, et ex summis miseriis, lues erumpens, his sedibus incubuit."

Before the time of Herodotus, the canals or sluices were not formed, and the valley in which the Nile flowed, from being so unwholesome, was entirely uninhabited; the Egyptians, at that period, confining themselves exclusively to the more elevated situations. And the plague, which now commits such ravages in that fine country, only does so in consequence of those means being at present neglected, which in former times were found so efficient in preventing it.

Savari, who resided a considerable time in Egypt, points out in many parts of his letters, the most powerful causes that operate in deteriorating the air of that country. The observations of this author respecting the time at which the plague usually makes its appearance, clearly shew that it is solely dependent on causes which can be explained. Other remarks to the same effect might be also adduced from Prosper Alpinus, Volney, and many other authors.

M. Vivant Denon, specially engaged in the topography of Egypt, during the last French expedition, as well as the physicians who assisted him, represents the state of that country to be precisely such as is described by the above writers. Tavernier and Chardin, who have frequently visited almost every other part of the East where the plague is known to prevail, give us a similar account of those respective places. They in particular abounded in stagnant and corrupt waters, which the inhabitants at certain seasons were under the necessity of drinking, and it was at such seasons that the plague appeared. The people are also reported to have been suffering all the consequences of the most abject poverty and the most intolerable oppression; and throughout the whole, we may discover an uniform connexion between the presence or absence of the plague, and the existence or non-existence of such causes as are here alluded to. Taking Egypt as an example; the inundation usually commences in the month of June, and subsides in September. As soon as the river is sufficiently swollen, they open the canal. The water which had been allowed to stagnate during the nine months preceding, is thus rendered pure, and then it is observed, that the plague ceases. In September, the river again subsides into its proper channel; but from the bad state of the canals, owing to the carelessness of the Turks, a considerable quantity of water remains behind. This stagnated water becomes putrid and filled

with all manner of filth; the wells and reservoirs also, and even the water of the Nile itself, in some parts of its course, undergoes a similar deterioration; the North winds are succeeded by the winds from the South; many other sources of impurity supervene, and the plague again makes its appearance; prevailing to an extent proportionate to the quantity of those noxious miasmata which give rise to it, till June, when the canals and reservoirs are again filled with purer water, and the plague again ceases. The time of the year at which the inundation of the Nile takes place is almost always the same; at least with very little variation: but if at any time such a deviation does occur, it continues to bear the same relation to the existence of the plague. Should it take place somewhat earlier than usual, the plague appears proportionally sooner; if later, the ravages of that frightful disorder are also prolonged. Prosper Alpinus observes—Quò tardiùs venerit, eò mitior ac brevior sit judicanda.*

Some parts of Egypt are less frequently inundated than others, and they are less liable to be visited by the plague, notwithstanding the communication existing between the different regions continue the same.

M. Lassis observes, in the last place, that if the plague does shew itself during the inundation of the Nile, it is never with the same degree of violence as when it occurs in the interval, and is indeed so slight in general as scarcely to attract any particular notice.

In support of these opinions, he adduces the testimony of Dr. Pouqueville, who says—"In Ægypti regionibus ubi endemicè (pestis) grassatur, aëre oriri videtur; in Libiæ oris, ubi sævit singulis fere redeuntibus annis, semper austro spirante erumpit, et tanquam aliis ejus incumbens, advenitur; nam afflantibus Æthesiis, minimè aut rarò manifestatur;"† and of Prosper Alpinus who writes on the subject as follows:—"Pestis Cairi atque in omnibus locis Ægypti invadere eos populos solet ineunte Septembri mense, usque ad Junium;" and in another place—"Pestem nunquam Junio, Julio, et Augusto, mensibus in Ægypto vidisse affirmant."‡

M. Lassis concludes his work in a manner which most justly entitles him to the merit of having read most extensively on the subject which he undertook to investigate. Under the title of "Notices Historiques," he enumerates all the most striking instances of epidemics on record, from so early a period as 1491

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* Prosp. Alpin. Med. Egypt. † De Peste Orientale, page 8.

‡ Med. Egypt. part 1. page 70 and 71.

B. C., down to the year 1814. This occupies upwards of two hundred pages of his work, and comprehends a recital of above three hundred epidemics.

This article has been already swelled to so great a length, that it would neither be proper nor consistent with our object to dwell upon this part of our author's work. Suffice it to say, that throughout the whole, it is his chief endeavour to point out circumstances existing at the time, which are sufficient to account for the prevalence of all those epidemics of which he has given us the outline, independent of contagion, the existence of which in such diseases, he altogether denies.

In the course of the year 1813 and 1814, M. Lassis was present with the French army at Bautzen, Dresden, Geringswalde in Saxony, Josephstadt in Bohemia, and at Paris: at all which places, a fever reputed contagious by the Austrians, as well as by many of the French themselves, made considerable havoc amongst the troops.

In describing the symptoms of the fever he says—

"Ordinairement, plusieurs jours avant l'invasion, les malades éprouvaient du degoût, du malaise et un sentiment de lassitude. Au moment où la fièvre se déclarait, l'anordie devenait plus considérable, et il s'y joignait des nausées, souvent même des vomissements, de la diarrhée, des frissons irregulièrs, la soif, la cephalagie et des douleurs dans les membres. Chez la plupart la langue était humectée et se couvrait d'un conduit morgeux et jaunatre tres-épais."

Its duration varied; it sometimes terminated on the third or fourth day; in some not before the twelfth or fifteenth day; and occasionally was prolonged beyond that time. Relapses were frequent, but could always be traced to some irregularity, most commonly in diet, and not unfrequently from "la nostalgié," rendering them incapable of taking proper exercise.

M. Lassis enumerates the principal causes of the disease under the four following heads:—

1. Too great a number of individuals crowded into the same apartment.
2. The unwholesome exhalations proceeding from the privies, the galleries, and staircases; which places were most shamefully neglected.
3. Deficient exercise.
4. Excesses in diet, and not having proper exercise.

He then tells us, that on removing those causes the fever became much less prevalent, and much more mild and tractable.

But in reply to all that M. Lassis has said in support of his favourite doctrine of non-contagion, we must beg leave to observe, that this negative sort of proof is by no means satisfactory;

it is not sufficient to prove that such and such causes can produce fever, and that such and such causes tend to aggravate it when produced; and that when these causes are removed, the disease becomes milder and more tractable. This does not in the least affect the question of fevers being communicable by contagion. We can admit the influence of such causes even to the extent urged by M. Lassis; but this does not necessarily imply a renunciation of the doctrine of contagion. When he himself caught the distemper, it was a very easy matter to ascribe it to fatigue; but an adversary might dispute this, and not unreasonably maintain that the fatigue had influence, but only in as far as it rendered the body more susceptible of contagion.

M. Lassis in one part of his work merely makes mention of those striking cases that took place at Oxford and Taunton, but does not so much as attempt any explanation. It would, indeed, be presumptuous in us to give an opinion whether the fever that prevailed in the French army was contagious or not; neither are we quite certain that it was typhus; the symptoms enumerated by M. Lassis being only such as occur in the most common forms of fevers, arising from ordinary causas, as from fatigue, &c. and by no means those which, in this country, we regarded as characterizing typhus; but be this as it may, although the work of M. Lassis contains much useful and interesting information, we cannot look upon it as at all likely to accomplish the object of his undertaking.

A most respectable countryman of M. Lassis has very lately published a work, in which he maintains that an epidemic may become contagious. and again cease to be so:* and the field for observation which this gentleman enjoyed, being of much the same description as that enjoyed by M. Lassis, we suspect that if he had not had cogent reasons for entertaining a different opinion, he would have stood a good chance of becoming a convert. We are aware that some have denied that the fever which was so prevalent in London some time ago, was contagious; but we believe they are few indeed, even compared with those of an opposite opinion. We, ourselves, saw but too much of it, and had but too great reason to conclude it to be contagious.

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* Vid. Elemens de Pathologie et de Physiologie Pathologique par L. Cailliot, Dr. en Médecine, ancien médecin. en chef des armées navales ex de la marine.

ART. VIII. *Nachtrag zu den von Dr. Karl Günther mitgetheilten Nachrichten von dem Zustande der Augenheilkunde in England; aus Briefen des Herrn Dr. G. P. Holscher, K. Hannover. Hofchriurgus zu Hannover, an den Herausgeber. geschrieben in Feb.* 1817 *(aus Himly's Bibliothek für Opthalmologie).* 1 Band. 2 Stuck. Hannover, 1819.

Appendix to Dr. Günther's Account of the present State of Ophthalmology in England; being the substance of letters from Dr. Holscher, Surgeon to the Court at Hanover, to Dr. Himly, Professor of the Practice of Physic, and Lecturer on Diseases of the Eye, at Gottingen.

IN the selections we have made from the works of foreign authors, it has been our aim to combine enlightened and impartial criticism, with the cultivation of that spirit of goodwill which ought to unite the professors of the healing art, of whatever country they may be. In furtherance of these views, we have devoted our principal attention to those departments in which foreigners excel, on the principle, that the acquisition of knowledge must be infinitely more valuable than a triumph purchased by invidious comparisons. We have, in fact, been anxious to apply to science that law of charity and reason—that all are not wrong because they may differ from us in opinion.

There is hardly a work of any merit published in England which is not immediately translated into German. The criticisms and observations made on them are often so judicious, that we have resolved, occasionally, to devote a small portion of our journal to detail the opinions which foreigners entertain of us. It will be gratifying to our countrymen to see their observations confirmed by enlightened foreigners, or to trace the principles on which they differ.

The object of these letters is to give an impartial account of the state of ophthalmic surgery in this country. Dr. H. introduces the subject by a declaration of being influenced by no other motive than the desire of communicating to his countrymen the actual state of English surgery on this point.

"It is only since the time of John Cunnynghame Saunders, justly and honourably known to Germany by his admirable works on the eye, that this department of surgery has been raised in England to the dignity of a science. English surgeons, convinced that he who is not master of the whole science can never excel in a part, now feel the necessity of redeeming from the hands of empirics, ignorant as unprincipled, this most interesting department of the healing art. Saunders, Ware,

Hey and Wardrop have already, in an eminent degree, contributed to bring about this desirable revolution. Lectures on the diseases of the eye, which were before unheard of in England, are now generally given. During the winter of 1816, Mr. Travers gave a course of lectures on this subject, which, from what I observed, promised to advance the progress of this branch of surgical knowledge. It must be acknowledged that the degree of information on this important subject is extremely limited among the great mass of practitioners in England; and when Dr. Günther assigned this ignorance as the reason of the frequency of diseases of the eye in England, he ought rather to have said, that it was the cause of the great number of severe forms of eye disease which are found in that country. Indeed, the treatment generally adopted is purely empirical, as I was led to believe, from the vast number of patients, who presented themselves at the first ophthalmic Infirmary in London, with eyes destroyed by suppuration and other consequences of active inflammation. From the constitution of the Infirmary, it is impossible that it can be of that extensive utility which might be desired from an institution devoted to the alleviation of so much suffering and misfortune as the diseases of the eye entail. Thus, the days of attendance being only Tuesday, Thursday, and Saturday, if a child should be attacked with purulent ophthalmia on Saturday, his parents cannot apply at the Infirmary for relief till Tuesday, and to those who are acquainted with the rapid and destructive progress of this disease, it is unnecessary to say in what state the eye will be by that time. The very few beds which are allowed in the hospitals, are devoted solely to patients on whom operations have been performed, to the exclusion of those acute cases which evidently require the most constant attention of a practitioner."

"Mr. Wardrop devotes certain days in the week to the poor afflicted with diseases of the eye, and I had an opportunity of witnessing on some of these occasions, his skill and talent for observation. This surgeon studied some time at Vienna under Beer, and is intimately acquainted with our best works on the subject. It is impossible for me to acknowledge, in adequate terms the polite attention of this gentleman, as well as of Messrs. Travers and Lawrence, and the facilities which they afforded me in pursuing the objects I had in view. They, as well as every candid and enlightened surgeon appeared sensible of the want of due attention to this subject in England. The number of patients applying for relief every day at Charter-house Square was from 100 to 150. There is attached to this Institution a physician (Dr. Farre) and two surgeons (Messrs. Lawrence and Tra-

vers). The number of patients is too great—the forms of disease too various—the cases often too novel for the medical attendants possibly to do justice to them, when each attends only one day in the week. I cannot, however, advert to this subject without offering my testimony to the ability and zeal which these gentlemen display in the discharge of their duty. Dr. Farre deserves to be particularly mentioned, as well for the interest which he takes in the prosperity of the Institution, as for his scientific exposition of the nature of the cases, and the judicious practice which he adopts. This able physician is, from his labours in pathological anatomy, already pointed out as likely to occupy Dr. Baillie's place in London."

"Scrofula, in its various forms, is the great plague of the English nation, and is the foundation of many diseases of the eye. It is only necessary to attend one day in Charter-house Square to see every form of scrofulous affections of the eye. The causes of this disease are to be found in the mode of living of the lower classes, their indulgence in spirituous liquors; their residence in low, damp, filthy habitations; along the banks of the Thames for instance, a situation which was formerly a noisome marsh, and the occupations which they follow. The number of cases of amaurosis occurring amongst mechanics, as watchmakers, who, from the delicacy and minuteness of their works, are obliged to overstrain the eye, is very great in some towns, and in particular quarters of the metropolis. I may remark, that there are now several Ophthalmic Infirmaries, both in the metropolis and in some of the most populous towns, on the model of the parent Institution in Charter-house Square.

"Although we daily meet with the deplorable effects of Egyptian ophthalmia, we have still more frequently to lament the victims to the small-pox, which constitute more than two-thirds of the whole of those deprived of sight, who are to be met with in schools and charities set apart for the blind: an evil which at once excites our astonishment and indignation. The viscissitudes of climate, to which the English as a sea-faring nation are peculiarly exposed, render diseases of the eye of frequent occurrence amongst them. I have met in the Infirmary, and in other places, with many cases attributable to this cause, particularly amaurosis and pterygium, in sailors returning from the East and West Indies."

"*Egyptian Ophthalmia.*—Though the history of this complaint has been introduced to the notice of continental surgeons through the medium of Dr. Günther, and through the extract given by Roux from Sir James M'Gregor's observations on this disease, a few remarks upon it may not be unacceptable:"

The author then proceeds to give an account of the histories and opinions given upon this subject by Sir James M'Gregor, Peach, Waré, and others. On the subject of emetics in this disease, and on the claims of Sir William Adams to the merit of being the first to make use of such means, the author states his opinion in the language of the report addressed to the committee of the Eye Infirmary. He is unwilling to enter more fully into the conduct of Sir William Adams in this respect, whose merit as a practitioner in other points he conceives to be undeniable. Dr. Holscher concludes his observations by a short analysis of Dr. Veitch's account of the Egyptian Ophthalmia, as it appeared in England since the return of the army from Egypt.

Evacuation of the aqueous humour.—" This operation is now well known and generally practised in Germany, and the honour of its discovery and judicious application in opthalmic surgery, is due to Mr. Wardrop. I observed that in England it was too indiscriminately recommended, and Dr. Farre decidedly objects to its use in hippopium, except where immediate bursting of the cornea is apprehended. This physician has in general found this disease to yield to the antiphlogistic regimen and perfect rest."

Professor Himly, in a note, expresses his satisfaction at this opinion of Dr. Farre, as it coincided with his own observations, and that he was fearful the abuse of this otherwise useful operation would bring it into disrepute.

" The frequent recourse which English physicians have to bleeding, may be in a great measure attributed to the influence which their mode of living has upon their diseases; but I cannot help thinking that in the use of the lancet, they are often too free and indiscriminate. They are far behind us in the proper discrimination of the different varieties of amaurosis, and I have seen them fly to the employment of bleeding in this disease, with the same blindness with which some of their practitioners rush into the empirical use of calomel. They have all at once acquired a disposition to generalize, and have not even made use of many useful remedies, such as arnica, sublimate, &c."

The author does justice to the labours of the several writers on this subject, and strongly urges upon the attention of his countrymen, what Dr. Farre has written on the *mercurial action*, which he has found extremely serviceable when employed in conjunction with depleting measures.

He regrets that the mercurial pill, notwithstanding the high opinion which is entertained of Mr. Abernethy, should be so little used in Germany.

" The connection between diseases of the eye, and gout, and

rheumatism, is too much overlooked in England, a connection perhaps too much insisted upon in Germany, where it is not unfrequent to ascribe the failure of every eye operation to the supervention of arthritic inflammation. But during the whole time I attended at the London Eye Infirmary, I do not recollect having heard the term arthritic ophthalmia applied to a single case; and the only allusion made to the subject by Dr. Farre, was that he did not for a long time suppose that amaurosis could be caused by gout or rheumatism, but that a case in which amaurosis was cured by the accession of a regular fit of gout had convinced him of the contrary."

Dr. H. remarked the great prevalence amongst children, of the scrofulous and purulent forms of ophthalmia, and thinks that the tinctura opii might be more generally used than it is.

"English surgeons very seldom make use of specula, and I have frequently seen them embarrassed and foiled in their operations on the eye, from not employing them. These instruments ought certainly to be dispensed with as much as possible, but there are cases in which they are very necessary, as in young subjects, to fix the eye. I saw one case of operation for congenital cataract, where, from the impossibility of maintaining the eye perfectly steady, three ineffectual attempts were made to introduce the needle, the sclerotica was lacerated, and ecchymosis produced; and when, at last, the needle was introduced, the iris was wounded.

"From what I observed, I am inclined to think that the English surgeons are hitherto behind hand in the operative part of eye surgery. Adams is considered the most expert operator, and Wardrop also performs with great dexterity. The opportunities for improvement which are now so abundant, joined with their natural coolness and steadiness, must render them ultimately skilful and successful operators. They still use the chair with a rest for the hand, which tends so much to hamper the movements of the operator, and impede that freedom and confidence possessed by the Germans, and so necessary for a successful operation.

In the discrimination of the different varieties of cataract, the particular point in which German ophthalmology has made such progress, they are very defective. I have seen many proofs of this in men otherwise well experienced, whose deficiency might easily be supplied by a more intimate acquaintance with German literature. For example, one surgeon was unquainted with *cataracta punctata*, another performed extraction where the eye was completely amaurotic; and, where the other eye, though not cataractous, was likewise amaurotic. A third

proposed the operation of keratonyxis in a case of *cataracta siliquosa*, complicated with contracted and adherent pupil, &c. Were I to multiply examples of this kind, my motives might be attributed to party spirit, but in what I have said on this subject, I am supported by the sentiments of Dr. Kuhl, of Leipsic, and Dr. Witthusen, of Copenhagen, who state that the English are much behind us in what regards diagnosis, and particularly that of cataract—an opinion which must forcibly strike any one who has visited their schools.

"No narcotic is applied to the eye before proceeding to the operation of extraction, but belladonna is always used previous to depression and keratonyxis. The latter operation is now less frequently performed in England. I only saw it done in a few cases of congenital cataract. The English, apparently with justice, claim for Saunders the merit of the discovery and introduction of this operation; but it must be observed, that they have not sufficiently prosecuted it, and are almost ignorant of what has been done on the continent to perfect the operation, and point out those cases in which it is particularly indicated. They assert, that experience has led them to prefer depression through the sclerotica, which is the operation they generally employ, although many surgeons admit that the operation of extraction is the best operation, and one which every surgeon ought to be master of.

"The great merit of Beer is well appreciated. Wardrop, Wishart and others passed some time at Vienna, and have greatly profited from that excellent school. I was informed by Cooper, that Mr. Phipps, in performing extraction did not complete the section of the cornea, but left a small portion of it to be divided by the scissars, by which means he prevented the escape of the vitreous humour. To remove corneal staphyloma, I saw the ligature employed. The ligature was passed through the tumor, and the part included having dropped off, the cornea was closed by adhesive inflammation, and the patient effectually freed from the protuberance.

"The eye instruments made at Vienna and Göttingen are eminently superior to those made in London, where I have frequently seen accidents occur during an operation, from their bad temper and construction."

ANALECTA.

1. *Vaccination in the West Indies.*

We present our readers with the following extract of a letter from a gentleman of high respectability and intelligence in the West Indies, addressed to the Editor:

"Our Governor is just returned from his half yearly inspection of the neighbouring garrisons. He informs me that he found at St. Lucia a large body of negro pioneers, who had all been of one or other of the West India regiments, suffering in the most dreadful manner, under confluent small-pox, of which forty-six had already died. These men had all been vaccinated, and all reported to have been vaccinated with effect, and so entered in the medical roll of the army.

"At Trinidad, the whole party of black pioneers, who were equally supposed to have been secured against the small-pox by vaccination, received the variolous infection, and out of 149, fifty had died. All these men had the mark on their arm of the vaccine inoculation, were considered, and had been reported, by the medical department of the army as having had the true kind, and yet I understand not one has escaped it, while the *white soldiers* in each garrison, both at St. Lucia and Trinidad, although equally exposed to infection, have every one escaped. The medical department of the West India army are astonished, and various surmises are entertained. Some say, that vaccination is not a preventive against the small-pox in the black subject, others that the effect of the cow-pox as a preventive against the variolous disease is only temporary, and that its virtue is expended by time and climate; and I may indeed say, that all the various objections ever urged against the cow-pox are now embodied and brought forward against it. A Special Medical Commission has been sent from the head-quarters at Barbadoes to investigate the subject. I must mention, that the effect has been already extremely to dishearten the men, who give themselves up as soon as they are seized. I give you the fact without any comment, but I confess I am staggered, having so many hundred negroes, who have all been vaccinated.

"The small-pox has been lurking among the West India Islands for many months, and has raged with great violence in the French West India Islands, the governors of which applied to Lord Combermere for vaccine matter and "de par le roi." Immense numbers have been vaccinated at Guadaloupe and Martinique; but the small-pox reached many of our islands. Numbers of black and coloured people who had been vaccinated caught the infection; but it was generally laid on the spurious kind. Late events render this opinion deserving of inquiry."

We have felt it our duty, though with considerable pain, to lay this interesting communication before our readers, and shall imitate the example of our friend, by making few comments on it, reserving the reflections to which it gives rise until we receive the Report of the Special Commission, which has not yet arrived in this country. We trust, that this Report will satisfactorily explain what appears unfavourable to the opinions entertained of the efficacy of vaccination.

2. *Extract from the Journal of the Obstetrical Institution, in the Imperial Josephine Academy, at Vienna, from the 1st of November* 1816, *to October* 1818.

There occurred 155 cases of labour, which including three instances of twins, produced 158 children. Of these, 142 presented the head; 5 the breech; 4 the feet;

1 the face; 2 the right arm; and one was a premature birth, with presenting placenta. 151 of these cases were left to nature, excepting the necessary assistance in the breech and feet cases. 3 required turning, and one the application of the forceps. One only of the three cases of turning was crowned with complete success, and this occurred in a woman of 39 years of age, who had had 16 children, and twice undergone the operation of turning. The arm and a part of the navel string lay in the vagina, and the child was 8 pounds in weight. The second case happened in a woman at the 7th month. The child was dead, and only three pounds and a half in weight; but the uterus which had been 4 days in action (the waters discharged) embraced the fœtus so closely and completely that it was impossible to reach the feet, which lay very high up to the left side of the mother, although after a previous unsuccessful attempt opiates had been administered, and emollient applications had been continually used. The blunt end or handle of Smellie's hook was introduced under the guidance of the left hand behind the back of the child (who lay with its belly forwards), over the left thigh, so as to embrace the pelvic part of the back. The operator then pulled gently down to the entrance of the pelvis, which accomplished the delivery without the slightest injury to the mother. The third case of turning was in a woman eight months pregnant of her first child, and was rendered necessary by the placenta laying forwards. The hemorrhage was not very great, which appeared to sanction a delay, sufficient for the dilatation of the os uteri, by which some hours were lost. The delivery was accomplished by art with great ease, and the hemorrhage was trifling; but though inconsiderable as to absolute weight and quantity, it was proportionably too great for this woman's constitution. The means taken appeared at first successful, and the pulse and functions improved, when two hours after delivery she was seized with convulsions and died. Nothing is more relative, and hence more difficult to determine, than the capability of bearing loss of blood, which uncertainty indicates the propriety of early delivery in cases of placenta prævia. In the case where the forceps was applied, the third stage of labour had continued twenty-four hours from want of pains. This had probably its remote origin in a morbid increased action of the pulmonary organs, which did not shew itself during the delivery, but subsequently appeared as inflammation. The child was easily delivered, but from the long compression of the head, was dead. Another instance of the impropriety of overrating the powers of nature.

Of two out of the three twin cases, the first child presented the feet, and the second the head. In the third case both children presented the head.

Among the feet presentations, was an Acephalos, five pounds in weight, and sixteen inches long, which lived twenty-eight hours, and even swallowed a small quantity of tea.

The number of dead children was in all sixteen, of which eight were born dead, and eight died after birth. Among the latter was a six months child, of two pounds weight and twelve inches long, which lived nearly three days.

A child born at the full time, but extremely weak, was brought with great difficulty to cry, but not to breathe freely, and died with symptoms of suffocation. On dissection, the cavity of the thorax was found filled with yellow serum, as was also the pericardium.

The author goes on to give the history of some remarkable cases which recovered. Among these we notice a child born before the full time, five pounds in weight, and sixteen inches long, whose face and limbs were dark blue. The child was very weak, and did not take the breast for two days; from this period, however, it began to recover its natural colour, and got quite strong and healthy. Two children were born with Nævi on the head. In one of these caustic was applied. On the fifth day the anterior part of the swelling began to diminish, and disappeared on the eleventh day; the posterior part being rather increased, another piece of caustic was applied, inflammatory re-action was the consequence, which lasted wo days, and then it dissipated the tumor, and the child recovered.

Of the 155 women, six left the hospital, three died, and 146 recovered. One of the deaths was in a woman where phthisis was suspended by pregnancy, but the patient died of the disease thirty-six hours after delivery. The second case is very curious. A woman in the eighth month of pregnancy was brought into the hospital, labouring under severe pneumonia, for which she had been bled. She was in labour, and was delivered with great ease the same evening, but without alteration of the pneumonic symptoms; the day after, pain in the abdomen with tension, and diminution of the lochia and urine, took place, which symptoms were so violent as to threaten immediate death. This was, however, relieved, but on the fourth day after delivery the breasts swelled, and miliaria appeared and spread all over the body, forming suppurating pustules; four days after the pneumonic symptoms again got the upper hand, and the patient died. On dissection, the right lung was found inflamed and adhering to the pleura; the intestines inflated with air, the uterus was externally natural, but internally filled with blood, and part of it discoloured and sphacelated.

The puerperal fever occasionally made its appearance, but presented nothing remarkable. In one case it was purely inflammatory, and required active antiphlogistic treatment.

3. *Presence of air in the labyrinth of the ear.*

Most anatomists conceive the cavity of the tympanum to be filled with air, but that the labyrinth contains a fluid, in which, the membrane having the ramifications of the auditory nerve spread on it, floats. Professor Onansner and Dr. Ribes, in order to ascertain the truth of the last position, have lately instituted some new experiments. They opened under water the vestibule and canal of the cochlea, opening into the labyrinth, and each time observed bubbles of air rise up. Brichet has likewise found no fluid. Ribes has frequently found the membrana tymparum destroyed, without the nerve of hearing being thereby impaired. Sometimes it is ossified, and then occasions total deafness. Sometimes there is, as in young children, found a reddish fluid in the cavities which occasions deafness. Ribes asserts with Morgagni, that the ramifications of the auditory nerve are very manifest on the membrane of the spinal lamina of the cochlea, but that they cannot be traced to the labyrinth and vestibule.—*Himly's Bibliothek für Opthalmologie* 1. B. 3. *S.* 1819.

4. *Case of Melancholia, cured by spontaneous Salivation, related by Dr. Alexander Haindorf, Professor in Munster.*

The subject of this interesting case was a strong healthy girl of the sanguineous temperament. Her parents, who were tradespeople in the country, sent her to Munster to perfect herself in her trade. Soon after her arrival, and without any evident cause, she was seized with a deep and settled melancholy, combined with total absence of mind and inability to fulfil the most ordinary occupations. These symptoms were progressive, and terminated in a silence as complete as if the organ of voice were wanting. The efforts of her favourite brother, an intelligent student of medicine, were ineffectual to discover the cause of this malady. After ascertaining that love had no concern in it, he imagined it might be a species of nostalgia, and accordingly took her to her home. Meeting with her family and friends had not the slightest effect upon her; she looked at them as if she had been an automaton. During the ensuing six weeks, her bodily and mental health got worse; there had been from the beginning a redness of the face and coldness of the limbs, and in addition to this, the belly was hard and swelled, the menstruation suppressed, stools were only obtained at intervals of five or eight days, the urine scanty, the skin dry, and the appetite extremely good. A variety of medicines were used, but without effect; indeed, when they did affect the bowels, and

the abdomen was less tense, the appetite decreased, and the patient got daily worse in mind and body. Dr. H. in consequence gave up all medicine, and left her to the care of her brother. The malady appeared periodical. Among the different means employed, fear was once tried; she was carried to the vicinity of water, and threatened to be thrown in unless she declared her malady. She then spoke and said, she did not know herself what was the matter with her; she felt as if her neck was stiffened, and experienced pain in the pit of her stomach, in the head, and giddiness. We have not room to follow the narrator in the detail of symptoms, which are, however, highly interesting; suffice it to say, that they are characteristic of the highest species of melancholia. The deep unbroken silence—the total apathy and indifference to all objects—a desire to be alone or in bed, and a complete wasting of the body. The disease had now lasted nine months, and she passed her time almost entirely in bed, and her end was considered as rapidly approaching. It was observed, that her linen over her breast was constantly wet, this was supposed to be perspiration, and the effect of debility; on nearer inspection, however, this moisture was observed to harden and form a cake when dry. From the appearance of this secretion, a perceptible alteration was discernable. The eye became less glazed, the iris moveable, the countenance more open. At this period a discharge of saliva was seen issuing from the mouth; and the salivation increased to such a quantity that a quart was often discharged in the space of two hours. The general health sensibly improved, and the salivation was promoted. The debility of the patient, however, forbade the use of mercurial medicines. The return to convalescence was gradual; it commenced by reviving affection for her sisters, by interest in household affairs, &c. &c.; and thus she insensibly but perfectly recovered. In conversing on her malady, she had a perfect recollection of all that had been done for her. She spoke of the pain she experienced in the impossibility of expressing either gratitude or pain for the interest and affliction her friends testified for her; mild treatment always seemed to do her good. Her sensibility was so great, that the mere motion of her clothes almost threw her into convulsions. She frequently felt spasms in her neck and body, which occasioned great fear of death, aggravated by the impossibility she felt to give utterance to her feelings; she could assign no cause, but was inclined to think it began with a desire for home.—The patient perfectly recovered.—(*Zeitschrift für Physchische Aerste*, 1819. 2*d vierteljarhsheft.*)

5. *On the vascular network of the Choroid Coat of the Eye.*

Soemmerring has lately occupied 16 quarto pages in a very interesting work on this subject. Not satisfied with what had been already done, our author invented and tried various machines, in order to obtain a satisfactory view of the vascular network of the choroid coat. After more than 20 years trial to realize his wish, he on a sudden succeeded beyond his expectations by employing Woollaston's camera lucida, as simplified by his son, conjoined with one of Dollond's microscopes. Of incomparable beauty are the views of portions of the choroid coat, measuring scarcely one-fourth of a line square, obtained in this way; drawn by Soemmerring the son, and engraved by Schleich. Portions of the choroid coat of a man, a child, an ox, a salamander, and a cock, twenty-five times magnified, gave the result, viz. that the finest vessels in the salamander are absolutely larger than those of the ox and man. "It is now proved as a new anatomical fact demonstrated by ocular demonstration, that the blood-vessels of the choroid coat do not diminish in size, as the size of the eye-ball diminishes, but that the choroid coat of a small eye may be considered as a part of the choroid coat of a larger eye." (p. 20.) "Further, that the configuration of the vascular network of the choroid coat of the eye, in the various classes, genera and species of animals, is so different, that the coat of each may be thereby readily distinguished."

The retina has a distinct set of blood-vessels derived from the central artery, and

terminating in the central vein, and which have no communication or inosculation with those of the choroid coat excepting at the edge of the retina. From this separate system of blood-vessels, and owing to its own elasticity, the retina wrinkles and shrinks, not only after death, but during life, subsequently to violent inflammations, wounds, and bruises.—*Himly's Bibliothek für Ophthalmologie*, 1 B. 2 Stuck, 1819.

6. *Poisoning from Arsenic.*

We noticed an interesting case of this kind in a former number, but without entering into any of the particulars. The subject of it was a woman, 32 years of age, and whose husband had of late given strong proofs of his desire to be separated from her. Returning one day from work, she found her husband and children had already dined, a portion, consisting of potatoes and beans, being left in the oven for her, and to this she sat down with an appetite, but owing to its very unpleasant taste, compared to high seasoning with pepper; she could not eat much of it. Resuming her work, she was in half an hour attacked with a sense of burning heat in the throat, and violent pains in her belly, quickly succeeded by urgent thirst, vomiting, and diaorhœa. The symptoms increased, and on the second day afterwards, medical assistance was called in by one of the neighbours, but the medicines administered were rejected by vomiting, and on the night of the fifth day the patient expired, having on the day preceding her death been interrogated and given the most collected answers to the officers of justice. It was ascertained that the husband had bought arsenic a short time previously; and two of the children, who had tasted of their mother's dinner, were attacked with symptoms similar to her's, but recovered. No part of the infected food could be procured, from the husband having carefully thrown it away. On dissection of the body of the woman, the stomach and intestines were found highly inflamed, and the mucous membrane of these viscera in several places detached and vacelated.

The contents of the stomach, consisting of five and a half ounces of yellowish red fluid, in the sediment of which nothing in the form of powder could be detected, either by the touch or the eye, assisted by a microscope, were first subjected to experiment. Being mixed with 24 ounces of distilled water, the whole was subjected to ebullition for an hour, and then strained, when twelve and a half ounces of fluid were obtained, which was made the subject, of the following trials: The colour of a piece of litmus paper was not in the least altered by it. An ounce of it mixed with 20 drops of a solution of ammoniated copper, assumed a yellowish green colour, and deposited a slight precipitate of a similar hue, which, when dried and burnt, omitted a slight but very perceptible arsenical smell (like garlic). Another ounce of it, mixed with half an ounce of a solution of sulphurated hydrogen, became clouded, and soon after deposited a small yellow sediment, which, treated as the preceding, emitted first a sulphurous, and then an arsenical smell. A third ounce being put in a glass vessel, and made to boil, had as much boiling lime water added to it, when the mixture became milky, and the sediment also in this case gave a smell of garlic when burnt. (Experiments like the three preceding were made with a weak solution of arsenic, two grains to an ounce of boiling distilled water, and afforded similar results, with this difference, that the precipitates were in larger quantities.) A large teaspoonful of the fluid being poured on a red hot plate of copper, after the evaporation of the water, emitted a distinct smell of garlic, and there remained on the copper small white spots surrounded with a black ring, and which spots could only be effaced with difficulty.

The contents of the small intestines weighing ninety-two drachms and consisting of a fluid similar to that found in the stomach, mixed with a larger quantity of mucus and a little yellowish excrement, had thirty-two ounces of distilled water mixed with them, were then exposed to ebullition for an hour and filtered. Owing

to the quantity of mucus it was only at the end of several days that six ounces of filtered liquid were obtained, and what remained on the filter having almost coagulated, no more could be extracted. That which was procured did not, in the slightest, redden litmus paper. A portion of it mixed with a solution of ammoniurated copper, assumed a dark grass green colour, and deposited a bright green precipitate, which, dried and burnt, emitted the peculiar smell of arsenic. Another portion mixed with a solution of sulphuretted hydrogen, afforded a much larger sediment, than in the same experiment, with the fluid obtained from the stomach, and which sediment did not differ in the slightest from the colour of one of operment standing beside it, and it also gave the smell of garlic when burnt. A third portion of the fluid, made to boil and mixed with boiling lime water, produced a similar, but much more copious deposit than that obtained in the same trial with the first mentioned fluid. A tea spoonful of the fluid poured on a red hot plate of copper, gave the same results as in the former instance.

" However convincing these proofs were of the presence of arsenic acid in the fluids submitted to experiment, and also of the large quantity of it in that procured from the intestines, still in so important a matter we did not consider them sufficient, and we now proceeded to treat the æsophagus, stomach, and intestines, on the plan proposed by Valentine Rose, in order to detect any particles of arsenic that might be engrained in these parts, or enveloped in mucus, and to procure them in the solid form, or as metal. It may be previously remarked, that although it was now eight days since death, and four days since the parts in question had been removed from the body, and though they had not been kept in a cold room; still they did not emit the slightest putrid smell, they were as yet so firm and tough as to prevent their being easily cut with a common scalpel, a pair of strong scissars was required for this purpose. On the internal coat of the stomach and intestines something like a powder or crystals, could be perceived either by the touch or microscope. The weight of the whole was forty-four ounces, they were put into the vessel, previously used to boil their contents, along with three pounds of distilled water, and six drachms of caustic potass, and the whole boiled for an hour, when the decoction was separated from the solid parts, by means of a hair-sieve. To procure every thing that was soluble, the solid parts were again boiled in a pound of distilled water, and the decoction strained was added to that already obtained. On cooling the decoction, it assumed a dirty, ropy appearance, and several pieces of fat had formed on its surface, which were removed. It was put on a gentle fire and brought to boil, and nitric acid being gradually added to it, to saturate the potass, the fluid assumed a clear yellow colour. A considerable quantity of fatty and mucous matter dissolved by the potass was separated and removed by the filter, a few ounces of distilled water being poured over it to wash it. It must here be remarked, that when the potass was added, there was merely a soapy smell, but when the nitric acid was poured on, a very disagreeable arsenical smell was emitted. It was now again put on a gentle fire and neutralised with carbonate of potass, but so as to leave the acid slightly predominate, the fluid slightly reddening bitrum paper; for this purpose fourteen drachms of the salt were required. The decoction had now assumed a darker colour, and after some more mucus was separated by filteration, it weighed about fourteen ounces. It was again brought to boil, and mixed with twenty-eight ounces of briskly prepared boiling hot lime water in a glass cylinder. The mixture became instantaneously muddy, and a whiteish grey deposit subsided. The cylinder being allowed to remain untouched for a night, in the morning the transparent fluid was poured off, and the sediment being collected on a paper filter, was washed with distilled water and dried. The precipitate when dried, had an ash grey colour, and weighed forty grains; as much pure boracic acid, and ten grains of pure carbon being added to it, they were carefully triturated together, and the whole, weighing ninety grains, were put into a small thin glass retort, provided with a good lute, and exposed to an open charcoal fire till the retort became red hot. When cool,

the retort was carefully removed from the furnace, and the lute being removed, it was broken. In the bottom of it was a black loose charcoal mass, consisting of boracic acid and carbon, weighing sixty grains. In the neck of the retort, there was deposited a real regulus of arsenic in the form of a whitish grey, somewhat granular metalic sublimate. A piece of white paper firmly rubbed on this sublimate had a dark grey spot formed on it, which, smoothed with a polishing iron, assumed a distinctly metallic polish; and on being burnt, gave a strong arsenical smell. Part of the sublimate boiled in a sufficient quantity of distilled water and filtered, (whereby some undisolved greyish particles remained on the filter) assumed, on the addition of a solution of ammoniuriatted copper, a yellowish green colour, and immediately deposited a beautiful yellowish green precipitate, (Sheeles green). On breaking the retort, the small pieces of glass on which was some of the sublimate were collected together, and a piece of smooth paper wrapped in it and burnt at the candle, when a strong or arsenical smell was produced, as to oblige us to open the doors and windows.

The quantity of metallic arsenic contained in the sublimate may be thus reckoned. During the sublimation an empyreumatic fluid collected in the receiver, which did not redden bitrum paper, nor did not alter the solution of ammuriated copper, and consequently appeared to consist merely of water, which had been united with the powder, at a low temperature. The weight of this fluid was twenty-five grains, and this added to sixty grains of residium in the retort, makes eighty-five grains. Further, allowing that two grains of the in other respects fire-proof boracic acid, might be mechanically covered up with the moisture, we have remaining at least three grains of metallic arsenic in the sublimate. Seeing that Proust and Rose's manifold and repeated experiments coincide in establishing that in 100 parts of metallic arsenic there are 333 of arsenic acid, (white arsenic,) it follows that three grains of metallic arsenic are four of white arsenic; and it may be with certainty affirmed that these four grains of arsenic acid, actually were present in the viscera examined by us, and were separated by us in the metallic form. Of what remained of these three grains of metallic arsenic after our experiments, are deposited along with the broken pieces of the retort, in the sealed box, attached to this process verbal.

7. *Juridical Dissection of the Head.*

Dr. Wesener observed the following remarkable appearance in the skull of a man whom he examined juridically. The subject was a respectable citizen, regular in his habits, who, from misfortune, put an end to his existence by hanging himself. The examination of the thorax and abdomen presented nothing beyond what is usually observed in such cases. On opening the head he found the following deviation from nature. About the middle of the sagittal suture, the bones of the cranium were for the space of a sixpence, as thin as the most delicate lamella of bone, and in this spot were two openings, each about the size of a pin's head, through which two vessels ran, which arose from the superficial veins of the dura mater, and anastamosed with the veins of the scalp. On cutting into the scalp, though with great care, the blood flowed over the galea aponeurotica, in such quantities as quite to redden it; the cause of which appearance he could not at first account for. It appeared, that in the division of the scalp, those two emissaria Santorini were cut through. This skull is now in the museum of Professor Otto, at Breslau. This case is very important in a juridical point of view; for a slight blow on this spot would probably have caused death, either by direct depression, or by causing internal hemorrhage. *Hufeland's Journal der practishen Heilkunde. Zweites Stück, Februar.* 1819.

8. *Extraordinary Case of Aneurism.*

A bricklayer's labourer, æt. 44, of a healthy appearance, became afflicted in May, 1818, with severe oppression about the chest, shortness of breath, anxiety. He became pale, fatigued by exertion, particularly by going up stairs, started in sleep, and lost his appetite. He took digitalis, improved rapidly, and resumed his employment; but in July, the same symptoms became extremely troublesome. He could now only rest on the left side in a recumbent posture, coughed, and the pulse was somewhat quickened. He continued thus three days; the pulse then became irregular and hard. Digitalis, and nitre were prescribed, six leeches applied to the breast, and an enema administered. He slept calmly at night, and appeared improved, but on the fourth morning he suddenly fell down dead. Sectio cadaveris.--The sternum, about the junction of the sixth rib, was adherent to the pericardium, and the right side of the chest was filled with coagulated blood. Separating forcibly the sternum, an opening was made into a cavity, at first appearing to be the right ventricle; it had burst, and discharged the blood which filled the cavity of the chest. On more close examination, this sac appeared to be an aneurism of the aorta just above its origin, which was sufficiently large to contain eight ounces. It was contained within the pericardium, and hung over the right ventricle, which it entirely covered, and pressed against the spine. The rest of the heart appeared nearly healthy; the pericardium was adherent throughout, either to the aneurismal sac or to the heart. The internal membrane of the aorta exhibited several ossific spots. The contents of the cavity of the abdomen were healthy. *Hufeland's Journal du praktischen Heilkunde, Julius,* 1819.

9. *Of the Radix Ratanhiæ.*

Dr. Rath, of Nordhausen, has published some remarkable cases of passive Menorrhagia and fluor albus, which, after resisting all the usually employed remedies, as cinchona; acid sulph; dic. catechu; ext. lig. camp; alumen. ipecac. opium. hyoscyamus, &c. &c. as well as injections of oak bark, galls, &c. were very easily cured, by taking for a short time, a decoction of this root, in the proportions of one ounce of the root to eight ounces of fluid. There are three cases of minorrhagia, three of fluor albus, and one of emaciation and debility, from an almost constant seminal discharge in a young man, who had been addicted to onanism and sexual connexion at an early age. In each of these, we are told that all the hitherto known resources of medicine had failed, and, of course, that the Rad. Ratanhiæ alone saved the victims from a premature grave. If this be not exaggerated, it is, indeed, a valuable addition to our Materia Medica, although Dr. Rath tells us it failed in two cases of consumption, to remove the colliquative sweats and diarrhœa, &c. "because, perhaps, the disease was too far advanced, and the powers of life too much depressed to be assisted by even the best means." *Hufeland's Journal der practischen Heilkunde, Junius,* 1819.

10. *Voluntary Death by Hunger.*

Professor Hufeland, in a late number of his Journal, gives a most extraordinary case of a tradesman, who, impelled by a succession of misfortunes, and absolutely destitute of the means of procuring food, retired to a sequestered spot in a forest, and there resolved to starve himself to death. He put this determination in force on the 15th of September, and was found on the 3d of October, (18 days), still living, although speechless, insensible, and reduced to the last stage of debility. A small quantity of liquid was given him, after which he expired. By his side was found a pocket book and pencil, with which he had contrived to keep a daily journal of his state and sufferings, and in which he had persevered till the 29th of September. He begins by giving an account of himself, and states that he was a respectable tradesman, possessing good property, of which he

had been deprived by misfortune and villainy, and that he had come to the determination of starving himself to death, not so much with the view of committing suicide, as because he was unable to procure work; that he had in vain offered himself as a soldier; and was too proud to apply to unfeeling relations. This note is dated on the 10th, which day he had employed in constructing a little hut of bushes and leaves. On the 17th, he complains of suffering much from cold, and in his journal of the 18th, he mentions having suffered from intolerable thirst, to appease which he had licked the dew from the surrounding vegetables. On the 20th, he found a small piece of coin, and with great difficulty reached an inn, where he purchased a bottle of beer. The beer failed, however, to quench his thirst, and his strength was so reduced, that he took three hours to accomplish the distance, about two miles. On the 22d, he discovered a spring of water, but though tormented with thirst, the agony which the cold water produced on his stomach excited vomiting and convulsions. The 23d made ten days since he had taken any food but beer and a little water. During that time he had not slept at all. On the 26th, he complains of his feet being dead, and of being distracted by thirst; he was too weak to crawl to the spring, and yet dreadfully susceptible of suffering. The 29th of September was the last day on which he made any memorandum. We regret that no dissection was made. *Journal der practischen Heilkunde herausgegeben von C. W. Hufeland. Drittes Stück, Marz*, 1819.

On Chincough and Fever as it appeared in Tobago.

(Being extracts from the Letters of an intelligent Surgeon in that Island addressed to the Editor.)

Tobago, since it has been a Colony, perhaps never suffered to such an extent as during the last twelvemonths. The mortality by all accounts is unusually great. It has fallen in a large proportion upon the white part of the population. The four months immediately following my arrival in December, presented scenes of such misery, as I hope I shall never witness again." "The estates were little better than hospitals, white and black, young and old, were sick." "The chincough spread among us like wildfire. It made its appearance at Burleigh castle early in December, about the same time with the fever in the fort, and was said to have been brought from Grenada, where it had been raging all the last summer. The season preceding it had (as in all other parts of the world) been exceedingly hot. And at the time it was first observed in the island, the weather had assumed the cold and bleak weather ascribed to the months of February and March, only more wet than usual at that period. The extreme fatality of the disease on this occasion has given me as much uneasiness as surprise, as it is one considered by most writers as being milder in warm than in cold countries.*

"The cough in all its features is exactly that of home; but the fever which attends it differs entirely. I observed no case without a distinct febrile attack, and in most cases this was very smart. In all of them the fever was a well marked remittent, the abatement taking place generally towards morning. The exacerbation was very strong, and exhausted the strength of our little patients very fast. I never met, except in one or two grown up boys, with any of that spirited indifference after the fit of coughing is over, that we see so common in England, here they lay in a languid and helpless condition, seemingly unable to stand another fit. One or two deaths having occurred rather unexpectedly, led me to examine the progress of the disease with every possible attention. The yaws are unfortunately very prevalent on these estates, and there were a great many at the height of the disease at this period. As might have been expected, these became early sufferers, and the disease was particularly severe upon them, for no sooner had the fever commenced

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* Five hundred children have fallen victims to this disorder. The negro population of Tobago is about seventeen thousand.

than the yaws dried up; great oppression took place in breathing, and the head and eyes always affected with pain and heaviness. In general the disease made rapid strides, and, except in two instances, I believe, they all perished. In two instances, were the diseases were thus combined, the patients died in a state resembling furious madness, biting and tearing their mothers breasts, tossing their eyes and limbs with great violence, screaming aloud, and at times becomes strongly convulsed. The treatment of these children can hardly be described. It was greatly undecided, every thing was tried, nothing persevered in. I cannot say more for one medicine than another; but had the *coal tar* been sent out calier ,it might have proved very valuable, and I wish we had pushed bleeding farther. In nineteen out of twenty cases, the immediate cause of death seemed to be from suffocation by the inspissated mucus."

" With respect to the fever which has so depopulated the island, and held us for so long a time in terror, it is needless to speak much, as it would reqnire both a long and laboured detail, neither of which I can at present find leisure for. Dr. Panting, I hopc, will give his observations to the medical world, his services on that occasion can never be too highly estimated in Tobago. He thinks Dr. Boyd's account of the Minorca fever, more nearly resembling this, than any other he has seen, only that blood-letting was used to a greater extent with advantage than could be done here. The prevailing and strongest feature of the Tobago fever was pain of the head. From first to last this symptom proved most distressing to the patients. Nothing but salivation had the smallest good effect upon it. Opening the temporal artery, the jugular vein, it seems produced but a momentary relief. It is remarkable, that upon opening the head, scarcely any traces of disease could be found, except slight conjections in the veneous trunks. Very great despondency and anxiety, amounting in many instances to complete despair, was a constant symptom immediately upon being attacked:—latterly, there is very little doubt, that this state was induced by the unfortunate result of the numerous cases taken to the hospital, and in all probability proved a frequent in cause of death."

12. *German Universities.*

[Extracts from the Report of the Proceedings of the Diet of Frankfort.]

The German Universities, with some few honourable and generally acknowledged exceptions, no longer correspond with their former reputation. It is long since enlightened observers have seen and regretted, that in more than one respect these institutions had departed from their primitive character, and the spirit in which their illustrious founders created them. Carried away by the torrent of the age, many Academic Professors have mistaken the real object of the Universities, and have given them an arbitrary and frequently pernicious direction. Instead of forming the students entrusted to their care for the stiuations they were destined to occupy in the State, by fostering in them those sentiments of affection and devotion of which their country would have reaped the fruit, they have pursued the phantom of a cosmopolitic education, have filled with dangerous reveries minds equally accessible to truth and error; and have inspired them, if not with hostile dispositions, at least with a decided aversion for all that they see established around them. The result of this false doctrine has proved as detrimental to the interests of the State as to those of the rising generation; it has created in the latter the pride of imaginary perfection, contempt of all positive doctrine, and the pretension of re-establishing social order on the basis of some impracticable system: and many young men who were sent to learn have constituted themselves the preceptors and reformers of their country. This dangerous change has not escaped the notice of the Governments: they have long observed and deplored it; yet their laudable anxiety to respect the freedom of instruction, so long as it did not directly compromise public order, and the embarrassment occasioned by twenty years of war and disasters, have deterred them from opposing the progress of evil by efficacious remedies. But at the present time, when, under the benign influence of general

peace, and the auspices of Princes sincerely and actively engaged in securing future happiness to their people, we were authorized in supposing that the Universities would again be placed within those boundaries in which they had formerly so honourably served the cause of their country and humanity: the most hostile attacks against the principles on which repose the peace and security of Germany have issued from those very Universities; for, either through excessive blindness or culpable connivance on the part of the professors, the noblest faculties of youth have been perverted in favour of extravagant projects and enterprises, which, though impotent or absurd, are not the less reprehensible and criminal, since these fatal delusions have given rise to crimes dishonourable to the German character. Indulgence would degenerate into weakness, and prolonged indifference with regard to such a cruelly unnatural abuse of a privilege, would render all the German Governments responsible to their contemporaries and posterity.

Provisional Decree relative to the measures to be taken concerning the Universities.

Sect. 1. The Sovereign shall make choice, for each University, of an extraordinary Commissioner, furnished with suitable instructions and powers, residing in the place where the University is established; he may be either the actual curator, or any other person whom the Government may think fit to appoint.

The duty of this Commissioner shall be to watch over the most rigorous observation of the laws and disciplinary regulations: to observe carefully the spirit with which the professors and tutors are guided in their public and private lectures; to endeavour, without interfering directly in the scientific courses, or in the method of instruction, to give the instruction a salutary direction, suited to the future destiny of the students, and to devote a constant attention to every thing which may tend to the maintenance of morality, good order, and decency among the youths.

Sect. 2. The Governments of the States, Members of the Confederation, reciprocally engage to remove from their Universities, and other establishments of instruction, the professors and other public teachers, against whom it may be proved, that in departing from their duty, in over-stepping the bounds of their duty, in abusing their legitimate influence over the minds of youth, by the propagation of pernicious dogmas, hostile to order and public tranquillity, or in sapping the foundation of existing establishments, they oave shown themselves incapable of executing the important functions intrusted to them, without any obstacle whatever being allowed to impede the measure taken against them, so long as the present decree shall remain in force, and until definitive arrangements on this point be adopted.

A professor or tutor, thus excluded, cannot be admitted in any other State of the Confederation to any other establishment of public instruction.

Sect. 3. The laws long since made against secret or unauthorized associations at the Universities, shall be maintained in all their force and rigour, and shall be particularly extended with so much the more severity against the well-known society formed some years ago under the name of the General Burgenschaft, as it has for its basis an idea, absolutely inadmissible, of community and continued correspondence between the different Universities.

The Governments shall mutually engage to admit to no public employment any individuals who may continue or enter into any of those associations after the publication of the present Decree.

Sect. 4. No student, who, by a decree of the Academic Senate, confirmed by the Government Commissioner, or adopted on his application, shall be dismissed from a University, or who, in order to escape from such a sentence, shall withdraw himself, shall be received in any other University; and in general, no student shall be received at another University, without a sufficient attestation of his good conduct at the University he has left.

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Derselbe, Die Lungenfäale, die Lungen-und Milzseuche des Hornviehs, ihre Kenntnisz, Heilung und Vorbanung, durchaus nach eigenen Beabachtungen. 8vo. Daselbst.

ERRATA.

Page 8. line 4, after " early," insert " as."
9. 37, for " even," read " ever."
12. 22, before " of," insert " to."
57. 18, for " introduction of the finger," read " application of the hand."
69. 16, for " preposses," read " prepossesses."
80. 39, for " augmentum," read " argumentum."

NOTICE TO OUR READERS.

As many errors and omissions have occurred in the insertion of Subscribers' Names, no list will be inserted till the conclusion of each volume; therefore a complete List of Subscribers will be given with No. VIII. August, 1820, previous to which time, Gentlemen are requested to forward their names to Mr. J. ANDERSON, No. 40, West Smithfield.

The conclusion of the " Sketches of Gottingen," will appear in our next.

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THE

QUARTERLY JOURNAL

OF

FOREIGN MEDICINE AND SURGERY.

FEBRUARY, 1820.

ART. I. *Biographical Memoir of Giambatista Monteggia, late Professor of Surgery, at Milan, by Dr. Enrico Acerbi.*

GIAMBATISTA MONTEGGIA was born on the 8th of August, 1762, at Laveno, a village situated upon the banks of the Verbano, the outlet of lake Como. In his youth he was sent to the neighbouring town of Pallanza, where he studied the rudiments of the Latin language; but whatever the cause was, these elementary studies were of short duration, and of little account. When seventeen years of age he went to Milan, and, on the 14th of September, 1779, was enrolled among the students of surgery at the great hospital, where he distinguished himself by a punctual performance of his duties, and an assiduous and devoted application to study. He was a pupil of the celebrated professors Patrini and Moscati. He cultivated the science of practical anatomy with so much ardour, that he was soon able to perform with dexterity the most difficult and important operations in surgery, and far surpassed in knowledge and skill his fellow students, who were satisfied with the mere academical demonstrations. He devoted himself also to the pursuit of chemistry and botany.

After Monteggia had finished his studies in the hospital, and had attained his twentieth year, he received a surgical, and some time after, a medical diploma from the university of Milan, in which he underwent the probationary examinations with the greatest applause. These academical difficulties being overcome, he proceeded, under the direction of his own genius, in

an extensive and accurate study of all the classical writers in medicine, from the days of Hippocrates to our own times.

When twenty-six years of age, he published his Anatomical and Pathological Observations; a work which afforded most ample proofs of a highly cultivated genius, and of great acuteness in observing the phenomena of disease. In a Medical Journal, published at that time at Venice, we find the following encomium bestowed upon this work of Monteggia's:—"The perspicuity of the style, the simplicity of the language, and the systematic arrangement of the facts recommend it to our perusal. The truth of the statements which it contains, the depth of the reflections, and the importance of the subjects render it so interesting, that if we once take it into our hands, it is impossible not to read it from beginning to end with uninterrupted attention and true pleasure." There are some very curious observations in this little work respecting diseases in general, and very accurate dissections of the parotid gland, as affected subsequent to fever by metastasis, with useful hints on the obstinate nature of ulcers of the leg, when complicated with obstructions of the liver. He also stated in it some ingenious conjectures respecting the symptoms which succeed to injuries of the brain, and gave excellent rules for the diagnosis, and method of cure in ruptures; in a word, it might be considered as an epitome of all the rare and valuable facts which he had collected in pathological anatomy. His most interesting morbid preparations were presented to the Anatomical Museum of the University, for which he obtained the thanks of the magistracy.

After a probation of eleven years in this hospital, he was nominated, in 1790, assistant-surgeon, and in the following year, anatomical dissector. He was, besides, commissioned by the Government, to superintend the jails of the city and of the criminal forum.

In 1791, being then in the twenty-ninth year of his age, he published, with notes, a translation from the German into the Italian, of Fritz's Work on the Venereal Disease; and three years after, his own annotations on the same subject, with the view of supplying the defects of that compendium. These were devoted chiefly to the consideration of the nature and cure of gonorrhœa, the employment of balsams in the early stages of the complaint; the urinary affections which arise from impure contagion; the cautions necessary to be observed in the introduction of armed bougies and elastic gum catheters; the singular characters of some corroding and spreading syphilitic ulcers; and the obstinate dispositions of a species of chronic

ulceration in the vulva not previously observed. This work was received with universal admiration, and, in particular, procured for the author the most flattering testimonials of esteem from the celebrated Professor Franck.

Besides his acknowledged works, he published in his youth some important memoirs and letters in the Journal of New Medico-Chirurgical Literature. In these (1792) he treated of simple fracture of the ribs, and shewed, that the broken bones might reunite without confinement to bed, and the troublesome cautions recommended by Heister and Petit. His letters, in 1793 and 1794, contained an able exposition of the fundamental principles of the Brownonian system, with the view of rendering it clear and distinct. Although he manifested a predilection for the doctrines of the new school, yet he was aware of the necessity, in all medical reasoning, of giving due consideration to epidemical influence, and to the specific operation of particular remedies. In attempting to reduce to the principles of Brown, the classification and cure of external diseases, or those which more strictly belong to surgery, he perceived that dangerous abuses would follow from the general adoption of the new system, and clearly foresaw that this splendid theory would experience a similar fate to those which had previously been proposed.

Among the short memoirs which he published, and which are worthy of notice, is the history of a singular case of simulated mania, which was inserted in the Medical Memoirs of Dr. Giannini, in 1800, and from which many useful hints may be obtained, respecting the action and use of opium in intellectual derangement, as well as in feigned madness.

In 1795, the 33d year of his age, he was elected Professor of the Institutions of Surgery in the New Theatre erected in the Great Hospital at Milan.

In 1796, he published a translation from the German of Stein's Work on the Obstetrical Art, to which he added some observations of his own on laborious labours, and on the means by which life is preserved in the infant during pregnancy and at birth.

In 1802, he commenced the publication of his Chirurgical Institutions, and finished them, in five volumes in 8vo. in 1803. To this work, the most distinguished men of science in Europe gave their decided approbation.

In 1806, he published a third edition of Fritz's Compendium, corrected and enlarged, with much new and appropriate information, and subjoined to it a Dissertation on the Use of Sarsaparilla in the Venereal Disease.

In enumerating his writings, we ought not to omit making mention of a short but important letter addressed by him to Dr. Guiseppe Baronio, which was inserted in the Collection of the Society for the Encouragement of the Sciences and Arts established at Milan, in 1809. His chief objeet in that letter was the consideration of the propriety of extirpating the uterus when affected with cancer; an operation which he first conceived, and proposed to the public in his Practical Annotations on the Venereal Disease, towards the end of the year 1794, but which, in 1808, was revived and described by Professor Osiander, at Gottingen, as an original discovery of his own. In the Journal for 1808, of the same Society, of which Monteggia was now a member, two Dissertations appeared by him; one on Baynton's New Method of curing Ulcers of the Legs—the second on the Operation for forming an Artificial Pupil, proposed by the Surgeon Carlo Donegana, of Como.

The extensive circulation of his valuable works, and his high reputation, obtained for him the congratulations of the greater number of the learned societies of Italy. He soon after became an associate of the universities of Mantua, Genoa, Venice, Livorno, Florence, and Lucca, and was elected a stipendiary Member of the Institute of Sciences and Arts at Milan. To this last society he made several communications, particularly on the supposed complication of contagion with the vaccine virus, and on a new method of suppressing the flow of blood during amputation. He also gave the history of a case of extra uterine pregnancy, of angina pectoris, and of the unexpected death of several puerperal women.

He was also a member of the Commission for Vaccination, in which office he collected many histories of important cases, tending to perfect that discovery, and for which he was honourably mentioned in the Medical Memoirs of Dr. Giannini.

After a practice of more than thirty years duration, combined with much study, he published a new and amended edition of his Chirurgical Institutions, the first five volumes of which appeared in 1813 and 1814, while the author was yet alive; the three last volumes were printed from the first edition, in the years 1815 and 1816.

In this work we find much new and valuable information on the most important points in surgery, particularly in what relates to aneurism, and the various methods of operating for it; also on morbus coxarius, scrofula, tumours, cancer of the uterus and mammæ, and the sympathy which subsists between these organs; strictures of the urethra; a proposed operation for

dropsy of the pericardium; and observations on the irritation succeeding to violent external injuries. It contains also a description of a curious affection in walking, which he denominated *dilombamento* or *sciancamento*, and which occurs in young girls at the time they first begin to walk, and continues during the remainder of their lives. His remarks tended much to simplify the treatment of contusions and wounds, and to perfect the apparatus employed in fractures and dislocations of the bones. In truth, we find in this publication omplete treatises on arthritis, podagra, tetanus, bites of the viper, hydrophobia, angina, metritis, biliary calculi, &c.

In these Institutions, Monteggia would have presented to surgery a classical treatise, which alone would have formed a safe and convenient guide in the theory and practice of the surgical profession, had not death cut short his meritorious undertaking, when only five of the nine volumes which he considered necessary to its completion, had been published. On that account it happened, that the third part, in which he treated of particular diseases, was reprinted from the first edition without any change, and only the outlines of the fourth part remain, in which he proposed to illustrate the various surgical operations assisting the practice of medicine. The heads of this branch were as follow: the various modes of applying electricity, and the indications to be observed; the rules demanding attention in vaccination; the means of recovering persons apparently dead; and, in a word, the principal surgical remedies. But, alas! death cut short his unfinished designs. Notwithstanding his unwearied diligence in study, and most zealous attention to the duties of his profession, he was always distinguished for his kind and sympathizing treatment of the poor, and his anxious endeavours to administer to their relief, even when his own health began to decline. This prevented him, for some time before his death, from taking that repose which he required. On the 5th of January, 1815, he became much indisposed. At first he seemed to suffer merely from a febrile attack, with derangement of the bowels, but in a few days an erysipelatous affection appeared near the right ear, which gradually spreading over the whole countenance, soon assumed a most alarming appearance, and terminated fatally on the night of the 17th of January. Under the vestibule of the principal entrance into the Great Hospital of Milan, a bust in white marble, by the Roman sculptor Facetti, is erected to his memory, surmounted by a tablet, decorated with the emblems of medicine, and on which a simple but elegant and affectionate epitaph is inscribed.

ART. II. *Abhandlungen aus dem Gebiete der practischen Medicin besonders der Chirurgie und Augenheilkunde. Von Ph. Fr. Walther.* Erster Band, mit 3 kupfern. Landshut, 1810.

Practical Essays in Surgery and Ophthalmology. By Ph. Fr. Walther, M. & C. D. Professor of Surgery and Clinical Surgery in the University of Landshut, &c. Volume 1st, with 3 plates. 8vo. pp. 504.

THERE are four Essays in this volume: 1. on the diseases of the crystalline lens, and the origin of cataract, page 1. 2. On amputation at the joints, particularly at the shoulder, and between the first and second row of the bones of the tarsus, p. 91. 3. On the use of mercury in tetanus and hydrophobia, p. 166. 4. On the varieties of inflammation occurring in the eye, and their symptoms, p. 359.

It is certainly somewhat singular that the pathology of a disease, so frequent in its occurrence as cataract, should not hitherto have been investigated; that, contented with observing opacity of the lens, we should not have inquired into the causes of so striking a change, and made it a matter of inquiry whether the loss of transparency in the lens constitutes of itself a disease, or be merely the common product of various morbid affections of the lens and its capsule. In the first essay of the present volume, we have an attempt to supply these desiderata, that essay containing a description of some of those processes which precede or accompany the loss of transparency in the lens and its capsule. That the structure and mode of nourishment of these parts gives a peculiar character to their diseases, cannot be a matter of doubt Whether the fibrous structure of the lens, discovered by Reil, exists during life, or only takes place after death, is a matter of less consequence to our present inquiry; of more importance is the question, how the lens floating loose in its capsule, and unconnected to it either by cellular membrane or vessels, is nourished. It is no doubt true, that some have inferred the existence of a vascular communication between the capsule and lens, but it has never been detected by the senses either in man or animals, and the supposition that this is rendered impossible from the extreme minuteness of the vessels, is contrary to all analogy. Where an organ is contained loose in a cavity, its blood vessels come to it in the form of a few large trunks enveloped in a process of the lining membrane of the cavity, as is the case with the testicle; and where the vessels are distributed from the whole inner surface of the membrane to the organ it

covers, they are in the form of a minute network, and the two parts are then necessarily adherent, as for instance the periosteum and bone. Our author is of opinion, that there are no vessels going from the capsule to the lens, but that the latter is nourished by imbibition ; that it absorbs its nourishment from the liquor morgagni, into which it again deposits its waste ; or, that the lens is nourished in the same way as plants and those animals in which there is no regular circulation but merely absorbent and exhalent vessels having no common centre. On this view of the subject, the nourishment of the lens must depend on the integrity of the few vessels which go to the capsule from the central artery of the retina and those of the corpus ciliare. When contusions attended with considerable concussion of the eyeball occur, these vessels becoming lacerated, the secretion of the liquor morgagni is interrupted, and the loss of transparency of the lens ensues ; the same is the consequence of the obliteration of these vessels in old age. The healthy secretion of the liquor morgagni is likewise necessary for preserving the pellucidity of the lens, for when that fluid becomes intransparent, constituting cataracta Morgagniana, it is always quickly followed by opacity of the lens. In a similar manner, the capsule rarely becomes opaque without the lens being also affected, and when it does occur, which is only in young individuals, the transparency of the lens is never quite perfect, and never of long continuance.

Our author is inclined to think that the lens is originally turbid in the fœtus, for it is scarcely possible to conceive such processes taking place in the fœtus as would render a lens, previously clear and transparent, opaque. Congenital cataract is the consequence of a check being given to the developement and progressive metamorphosis of the embryon. In this it agrees with other malformations, which do not arise accidentally from the influence of particular causes, but are actually originally present in every human embryon at certain periods of its existence, and afterwards disappear in the progress of that embryon to more perfect and nobler forms ; whilst on the contrary, should this progressive metamorphosis be checked, the imperfect condition remains, and is met with still existing at birth. In dissecting fœtuses under the age of three months, our author has generally found hare lip existing, and the palate cleft so as to leave but one cavity for the mouth and nostrils which is afterwards divided by a septum. The iris is originally imperforated ; and imperforation is the primary state of all parts where the apertures of the body are afterwards formed.

The anus, vagina, &c. are originally covered with a production of the integuments. Anchyloblepharon and symblepharon are original conditions of the eyelids, and it is only at a certain stage of the life of the embryon that these curtains detach themselves from the eyeball which is then naked, but is afterwards covered by a reflection of the integuments, previous to which a horizontal chink opens in the eyelids. Umbilical hernia at one time is present in every embryon, for the cavities of the abdomen and umbilical cord are one, and the intestines being contained in both indifferently, there is then no ring (umbilicus) to form limits to each.

These analogies, which might be pushed much further, leave little doubt that cataract is originally a natural state of the lens, which subsequently becomes clear and transparent by continued progressive developement. There are two kinds of congenital cataract; in the one, the cataracta lactea, the milky fluid which fills the capsule would seem to be the real matricial fluid out of which the lens is evolved; in the other, the cataracta centralis, the generative impulse has been sufficient to render the outer laminæ alone of the lens transparent, leaving its centre in its turbid state.

Cataract frequently arises during inflammation of the internal parts of the eye, so that there can be no doubt of its being produced by that process; and as will be afterwards shewn, inflammation not only attacks the capsule, but even the lens itself, occasioning turbidity of these parts. One of the most evident cataracts from this cause is that which follows wounds of the eye, in which the turbidity forms in the course of a short time during the progress of the inflammation consequent to the injury, and, as many good practitioners have taught us, disappears under the continued use of antiphlogistic remedies. There is another cataract which succeeds wounds, particularly contusions, accompanied with considerable concussion of the eyeball, but it is not the effect of inflammation: it occurs a long time, perhaps months, after the accident, and arises from the laceration of the few delicate blood vessels which go to the capsule. The opacity of the lens, which originates during the syphilitic and arthritic ophthalmiæ, no doubt arises from the inflammation spreading to the capsule. And in those cases, which are not very rare, where the lens is universally adherent to its capsule, both of these parts must have been the seat of inflammation.

The analogy between the effects of inflammation in altering the transparency of the lens and other pellucid parts of the eye, is striking. Suffusion of the cornea is almost the sole symptoms of corneitis, for when red vessels appear among the

lamellæ of this membrane it is only from a particularly violent inflammation, and the appearance of these vessels has always been preceded by the suffusion. Specks of the cornea, from the thinnest nebula to the thickest leucoma, are simply partial indurations of the cornea, the consequence of previous inflammation. Glaucoma, presuming it to consist in partial or total opacity of the tunica hyaloidea, never occurs, according to our author's experience, without preceding inflammation of the internal parts of the posterior hemisphere of the eye.

Many symptoms which accompany the early stages of cataract denote the presence, if not of acute, at least of chronic inflammation. To this may be referred the great sensibility to light, which sometimes remains even after the cataract is fully formed.

Gleize has remarked, and it is well known to all attentive practitioners, that in operating on cases of cataract in which the turbidity is of recent existence, there is always a greater tendency to inflammation succeeding the operation; so that if both eyes of a patient affected with cataract be operated upon exactly in the same way in every respect, the inflammation which attacks the eye that has been last affected is usually most violent, owing probably to the still existing slight inflammatory action in this eye, which here, as elsewhere, disappears as the inflammation terminates in induration.

Professor Walther has repeatedly observed inflammation in the capsule, and pointed out cases of it to his pupils, who after having been once accustomed to such examinations, have readily distinguished it themselves. It usually occurred in men about the middle of life and of a slightly cachectic disposition, and was always preceded by a string of various local affections, which had often commenced with itch, gout, or catarrhal affections. The disease occurs oftener in light eyes than dark, and is always accompanied with a slight change in the colour of the iris and form of the pupil, the first becoming a little darker, and the pupil slightly oval and drawn upwards and inwards to the root of the nose. The motions of the iris are at first more lively and extensive to partial variations of light, but subsequently they become more sluggish. The pupil is habitually smaller than in the sound state, and there usually exists a black ring of irregular breadth all round its edge, produced by a real eversion of the uvea, that is, the pupillary edge of this projects beyond the same edge of the real or anterior membrane of the iris.

Along with these symptoms, a number of red vessels now appear in the pupil itself, the largest of which are visible to the naked eye, which has been accustomed to such investi-

gations, but the greater number are only distinguishable with the aid of a sextuple magnifying glass. What to the first appears merely a red point, assumes, under the glass, the appearance of a most delicate tissue of vessels. The lenses used for such microscopical examination of the living eye should have a very short focus, and the patient ought to be so placed with respect to the light that the parts within the pupil be well illuminated, and not shaded by the glass or head of the examinator. In order to have the pupil as large as possible, the other eye should be kept closed during the examination, and a little of the solution of the extract of belladonna may be dropped between the eyelids an hour previously. And in inflammation of the capsule of the lens, the sensibility not being much increased, the patient can bear examination of the eye in a strong light and with dilated pupils without much uneasiness.

The red vessels observed in the pupil during inflammation of the capsule always constitute a sort of vascular wreath, situated at about a quarter of a line's distance from the pupillary edge of the iris; this wreath forms a concentric circle with the pupil, and is found on examination to consist, not of a circularly disposed vessel or vessels, but of a number of vascular arches, similar to those formed by the arteries of the palm of the hand and joint of the knee. To this vascular wreath there run in a radiated form as to a common centre, numerous vessels from the periphery of the anterior capsule. Some vessels seem to extend from the pigmentum of the uvea into the capsule, and might lead us to suppose that all the vessels seen in the pupil are merely prolongations of those on the posterior surface of the iris. This however is not the case; sometimes there are no such vessels present; where they are, it is only after the disease has lasted some time that they appear; whilst at other times, vessels are seen prolonged from the capsule into the uvea, reciprocally as those of the latter into the former. Besides, these prolonged vessels are observed to have an oblique direction with respect to the axis of the eye, and they never are the largest trunks, which we see come from the edge or circumference of the capsule. The vessels going between the iris and capsule never arise from the very edge of the former, but at a little distance from it on the posterior surface, so that nearly a line's breadth of the pupillary portion is free from these vascular sproutings.

From the vascular wreath we have described, vessels are seen spreading towards the centre of the anterior capsule, and there again forming clusters and arches; and although the connection between the vessels seen in different parts of the pupil seems interrupted at some points, yet there is no doubt it holds good

universally, although from the extremely minute size of the vessels they cannot be distinguished.

Posterior to the red vessels seen in the capsule, there appears in some cases a network of more delicate vessels deeper seated developed in the lens itself, the larger trunks of which are not always derived from the circumference of that body, but evidently come from its posterior surface directly forwards and then divide into branches.

The presence of these vessels in the lens, our author has repeatedly and distinctly observed, and he states that they present one of the most beautiful phenomena possible; that the only thing that comes near them is the finest injections of the choroid coat of the eye, such as are possessed by Sœmmering, and that the most successful injections of the villous coat of the intestines are far inferior to them. The existence of these vessels in the body of the lens in a state of inflammation, would seem to contradict the theory of the nutrition of that body what has been previously mentioned, and the supposed non-existence of vascular connection between the lens and its capsule. However, our author is of opinion that the vascular connection between these is entirely morbid, and is the same as that which occurs in inflammation of the chest where vessels are prolonged from the surface of the pleura into the pseudo-membrane formed on its surface, and that as the vessels of the anterior capsule shoot forwards into the pigmentum of the iris, so in a similar way they shoot backwards into the lens itself, and that the same holds good with respect to those of the posterior capsule, which being more copiously supplied with vessels, explains the fact of the largest vessels in the lens being seen to come from behind forwards. Moreover, it would appear that all inflammations of the lens begin in the capsule and thence spread to the former, in the same way that it often happens that inflammation seated primarily in the neighbouring parts, as the membrane of the vitreous humour, the corpus ciliare, and iris, sometimes extends in a secondary manner to the capsule.

At the apparent terminations of several of the vessels in the capsule, we distinctly perceive small knotty pieces of a whitish grey semi-transparent substance, evidently coagulable lymph, the presence of which effusion serves to disclose the manner in which inflammation of the lens and capsule produces opacity of these parts. The anterior capsule, where the vessels are very numerous, sometime assumes a peculiar velvety floculent grey or brownish appearance, which has led some to the idea that a flake of the pigmentum of the iris or choroid has been detached

and become adherent to the capsule of the lens, and which has led to the cataracta choroidea of Richter. But this is a mistake; we never find that a piece of the pigmentum has been detached, even when the greatest violence has been offered to the eye, the corpus ciliare lacerated, and blood effused into the chambers of the eye and under the conjunctiva. And even supposing it detached, would it become adherent to the capsule, instead of floating in the aqueous humour and being absorbed? The brownish spots on the anterior capsule are in some cases occasioned by the effusion of lymph, and by the extreme terminations of the vessels; and our author has several times in this kind of cataract, which is not at all rare, observed, with the aid of a magnifying glass, the vessels of the capsule and their prolongation into the spots mentioned. In other cases, the capsule had been previously united to the uvea by partial adhesions, and being separated either by the more lively motions of the iris, or by the application of mechanical violence, part of the pigmentum of the uvea had remained attached and adherent to the anterior surface of the capsule.

As to the state of the patient's vision who is affected with inflammation of the capsule of the lens, when the disease is severe, vision is indistinct and confused, particularly when looking at distant objects, whereas those that are nearer are seen, as if through a fine gauze, but without distinguishing therein some threads larger than others corresponding to the vessels. Neither does this gauze seem red, or are objects tinged with that colour.

Inflammation of the lens, as that of the bones, cartilages, and fibrous textures, always observe a chronic course. It proceeds very slowly, and is accompanied with little pain; nay, in some cases, none whatever, and when pain is present, it is not seated in the part itself but at the bottom of the orbit, over the forehead, or in the crown. When the disease has lasted some time, the blood-vessels in the lens and capsule become varicose and remain stationary so. This state of the lens is the same in kind with that which Scarpa and others have observed in the external parts of the eye, and called ophthalmia varicosa—a state intermediate between inflammation and its consequences. In a middle-aged man, whose mother had had cataract and her vision restored by extraction, our author observed the vessels of the lens to remain in their varicose state a whole year without undergoing the least alteration.

The various kinds of cataract correspond with the different terminations of inflammation; thus, the firm hard cataract is induration of the lens; the fluid cataract, where the capsule

contains a milky or puriform fluid seems to correspond with suppuration in other parts; and in the cataracta arida siliquata the lens is in the state of dry gangrene.

In order to understand in what manner inflammation produces opacity or induration of the lens, we may refer to the origin of specks of the cornea from corneitis, when these are not occasioned by abscesses of that membrane. During the inflammation, the secretion of the serous vapour (which occupies the interstices between the lamellæ, keeps these separate, and preserves the transparency of the whole,) is either morbid in quality, or it is entirely suspended. In the latter case the lamellæ come into direct contact and unite to each other by adhesive inflammation, whilst in the first case, instead of the clear serous vapour, coagulable or even puriform lymph is poured out between the lamellæ and unites them together as a pseudo-membrane, and in both cases opacity of the places where the lamellæ are adherent, is the consequence. In the same way as those of the cornea, the lamellæ of the lens also become adherent, in consequence of inflammation, the secretion of the vapour between them being stopped or vitiated. The turbidity which is the consequence is at first of a whey colour and partial, and, by degrees, extends to the whole lens; the seat of the beginning of the opacity is uncertain, sometimes one place and sometimes another, in which this kind of cataract differs from the cataracta senilis, where the opacity begins in the centre of the lens and extends to the circumference.

Though, from the structure of the lens, inflammation is most apt to end in induration, suppuration of it occurs frequently enough, for we must consider this as the cause of the cataracta lactea or purulenta, and the variety of it the cataracta bursata seu cum bursa ichorem continente of J. A. Schmidt. In the first, the lens is found wasted away, and its place occupied by a white milky fluid contained in the capsule, which is sometimes so like pus in its appearance as to have given occasion to the name of cataracta purulenta being long since given to it. La Peyronie found a puriform fluid between the capsule and partially wasted lens; and in the cataracta bursata, where besides the cataractous lens there is a sac filled with ichor in the opaque capsule, it seems that this can only have arisen from partial suppuration of the lens.

In the cataract named by Schmidt, arida siliquata, the lens and capsule are quite exsiccated like a piece of mummy, and shrunk up into very little bulk as other completely sphacelated parts.

Induration of the lens may also take place without inflam-

mation, and then it seems more of a scirrhous nature, indeed it is well known that cataract often occurs at the period of life, and under circumstances which appear to favour the occurrence of schirrus in other parts of the body. Purulent cataract may sometimes also be the effect of ulceration of the lens.

Besides inflammation, suppuration, induration, sphacelus, and varicosity of the vessels of the lens and its capsule, there are other affections of it which appear to be of a sarcomatous nature, such are the cataracta pyramidata, cataracta cum zonula, and cataracta arborescens. In the first (the pyramidata), from the opaque capsule, which is likewise thickened and contains a turbid caseous fluid, there projects an opaque substance of a pyramidal shape, having its point passing through the pupil into the anterior chamber, and in the substance of the capsule are seen shining silvery streaks running in various directions, and sometimes points on its surface of the same appearance. In the cataracta arborescens the peculiar affection is not confined to the capsule, but involves also the lens, where between the different opaque streaks the rest of that body is quite transparent.

In giving the analysis of this Essay, we have been anxious to keep as strictly as possible to our author's meaning, convinced that however visionary some of his opinions may at first sight appear, still they have the merit of being ingenious and original, and merit on these accounts to be candidly laid before the profession. As for the facts concerning the inflammation of the lens, we have no doubt of their truth, and we may add the words of the author, " that these must produce practical results, although they are not touched upon in the Essay itself. To instance one, I consider incipient cataract no longer incurable, and I have already combated it with success in some cases."

From the full account we have given of the first Essay of this volume, and the press of other important matter, we must leave the consideration of the others to a future opportunity.

ART. III. *Concours pour la Place de Chef des Travaux Anatomiques vacante à la Faculté de Médecine de Paris. Thèses présentées et soutenues publiquement devant les Juges du Concours, le 28 Avril,* 1819. *Par Gilbert Breschet, Docteur en Médecine de la Faculté de Paris, Prosecteur à la méme Faculté, premier Aide de Clinique externe à l'Hôtel-Dieu, &c.* Paris, 1819.

2. *Thèses soutenues publiquement dans l'Amphithéâtre de la Faculté de Médecine de Paris. Par J. Cloquet,* 1819.

WE have no such books published in England as those we have prefixed to this article. They contain the proofs which a surgeon is obliged to exhibit of his knowledge, before he can be elected to a Professorship in the Ecole de Médecine de Paris. The French owe this excellent regulation to the Revolution; for, previous to that event, the schools of Medicine and Surgery were in a lamentable state. Professorships were hereditary, and instead of a competition for such distinguished offices being extended to the whole kingdom, to wherever talents and learning were to be found, the choice of professors was confined to a small circle of intriguers; and the consequence was, that a languid, unvaried, obsolete routine—a jargon delivered in academical detail, from one succession to another, was substituted for that ardour and enthusiasm which can only be felt and communicated by those who have long laboured in a particular science. The Professorships soon ceased to be honourable distinctions, for he who expected it as an heir-loom, did not labour to form a character that would support its dignity; so that after having obtained the office, he was not even able to turn it to his own advantage. And thus the situation, which ought to have been the reward of a man's exertion during his youth, was lost, as far as its beneficial effects went, to the world. Examples of this are not wanting in our own country.

But the French Revolutionists would not permit any thing hereditary to remain in France. In the third year of the National Convention, a decree was passed for re-modelling the Schools of Medicine. In the new laws for the management of the Institution, they did not fail to lay down such admirable regulations for the election of Professors, as will always ensure the filling of the Professorships by men of talent, even though party party interest should be strong. A proof of this was shewn in Paris some years ago.

We shall here give a sketch of the ordeal through which the candidates for the place of Chef des Travaux Anatomiques

passed, on the late resignation of M. Béclard, who was promoted to a Professorship. It will shew, that in the system at present adopted by the French college, talents must always overcome intrigue.

The candidates were M. M. Breschet, Bogros, Sanson, and Jules Cloquet. The judges were M. M. Lallement, Richerand, Désormeaux, Dupuytren, Béclard and Marjolin. Professor Chaussier was president. The first meeting took place on the first of March, and then each candidate was ordered to have certain anatomical preparations completed for the Museum of the Ecole de Médecine, before the first of April. At the second meeting on the sixth of March, seven questions were put into an urn, one of which was drawn by a candidate. The same question was answered in six hours, in writing, by each of the candidates, without their having access to books, or communication with any one. On the following day, seven questions were again put into the urn. One of the candidates drew "On the Erectile Tissue." This he discussed publicly for ten minutes, and the other candidates were successively called up to discuss the same question.

At the next trial, each candidate made an oral dissertation of twenty minutes, on the "Earlier Periods of the Fœtus, and on the successive Evolutions of its Organs." To prepare for this question, which was also drawn by lot, each candidate was allowed twenty-four hours. On the succeeding day, the judges ordered the candidates to dissect a larynx in their presence, and to give a description of it, which should continue for a quarter of an hour. On the tenth of April, the candidates drew by lot the subject of a Dissertation, which they were to compose and print in fifteen days. On the 28th of the month, each candidate presented his Thesis, and defended it for half an hour against his competitors. On the 30th, the trials were finished by each of the candidates performing two operations on the dead body in presence of the judges.

M. Breschet was the successful candidate, he having five votes. M. Cloquet two. M. Cloquet was most honourably mentioned by the commissioners, and has since been elected Surgeon to the Hospital La Pitié. A sum of 600 francs was voted to him and M. Bogros, for their anatomical preparations. M. Sanson resigned the contest very early.

Such then were the trials which the candidates underwent for the office of Chef des Travaux Anatomiques. Of the spirit with which this contest was maintained, we may judge by the present publications.

We recollect with much pleasure, the Concours for the same

office, on the resignation of Professor Dupuytren, in 1814. The Essays by M. Beclard, together with his conduct during the time he filled the place of Chef des Travaux Anatomiques, are a sufficient proof that the commissioners appointed by the Ecole de Médecine were actuated only by a love of science in their election of him; and if we may be allowed to form an opinion from the Theses of M. Breschet, and from our acquaintance with him, we may assert that, in the present instance, the opinions of the electors have been decided by motives as pure. The Essays of M. Cloquet are valuable, as they contain a number of facts; but they are written more with the spirit of a mere dissector than with the views of a physiological and practical surgeon; one is upon the art of making skeletons, the other upon the different appearances in the herniary sac as observable after death. The consideration of them we shall defer to another opportunity. As each candidate was obliged to give an Essay on the art of making preparations, we have one from M. Breschet upon the different means of preserving preparations; but as the English anatomists are still so much superior to the French in that art, we shall not notice it farther than to recommend it as an addition to Pole's Anatomical Instructor. M. Breschet has also given an Essay on the formation of bone, and another on the veins of the spine. At present we shall confine ourselves to that which forms the greater part of the book *Hernia*.

In our number for August, in a critique on the Essays of Professor Langenbeck and M. Cloquet on the Anatomyof Hernia, we remarked, that after a student had made himself master of the different veiws that have been given of the various fasciæ connected with inguinal and femoral hernia, there still remained much more important matter for him to learn;—that the history of cases drawn up by an anatomical surgeon, would form by far the most valuable part of his studies; and when we look to the important parts connected with femoral hernia, and to the changes from the natural state induced by the presence of the tumor, we are forced to acknowledge that no operation requires more promptitude and caution, or a greater combination of talents and experience.

It is somewhat discouraging to the young practitioner to be told, after he has gone through what he considers a laborious study, that in the treatment of hernia, he must trust principally to experience, for there is no disease in the whole extent of surgery, where the nature of the symptoms are more equivocal, or where the experienced surgeon is so apt to be deceived; for it is not a Sabatier alone, that has mistaken a bubo for a hernia.

It is happy for the young practitioner, that the mass of facts on this question is now very great, and, though it is principally to the labours of our own countrymen that we are indebted, yet we turn with pleasure to the Thesis of M. Breschet; for in it we have a collection of, perhaps, the most valuable cases of hernia that have ever been published. They are cases operated on by M. Dupuytren, certainly one of the first surgeons in Paris. They are drawn up by M. Breschet, who has not only been for a considerable time the assistant of M. Dupuytren, but is also an excellent anatomist, and has had this superiority over his countrymen, that he has taken advantage of all that the modern English authors have written on the subject; and in the remarks which he has made he has shewn a great deal of liberal feeling towards the surgeons of this country.

In almost all the books which have been professedly written on this subject, the operation for femoral hernia has been described as a very simple operation; and the principal remarks which have been made by the authors of those publications are respecting the method, in which the stricture is to be divided, without endangering the arteries or the spermatic cord; but after having witnessed many operations, we are forced to conclude, that those authors have not noticed circumstances which are much more important in the question of the operation, than the relative position of the artery or cord: for in every operation some one or other of the following difficulties will be found, while there is hardly an instance on record, of a wound of the epigastic artery or spermatic cord. We trust we shall not be misconstrued in this matter, for none have a stronger conviction of the absolute necessity of attending to the natural anatomy of the parts concerned in femoral hernia; but this we shall say, that, in the desire which each author has had, to give his own peculiar notions of the anatomy of a very simple part, the grand and important difficulties have been often overlooked.

As a proof of what we have said, let us refer to the Dictionary of Surgery, which is professedly a compilation; and it will prove how little Mr. Cooper and Mr. Lawrence, who have been considered by the author as the authorities on hernia in this country, have attended to points of the greatest importance. In the extracts which are so copiously made from these works, we find very few observations on the difficulty of recognizing the true peritoneal sac; on the changes which take place in the parts superficial to the sac, and in the sac itself; on the danger of reducing the serum in the sac, by the taxis, and leav-

ing the intestine still strangulated; on the changes which take place in the gut, producing strangulation; on the difference between strangulation and incarceration; on the circumstances which render an artificial anus necessary, or on what is to be done for the renewal of the course of the fæces.

We are sure that some one of these questions will cross the surgeon's mind in every operation he performs; for we can assert, that we never saw two operations for femoral hernia which were exactly similar.

We have much pleasure in placing before our readers cases which accord with our own observations, and which prove that such points of difficulty are frequently met with, in actual practice.

First, of the changes which take place in the appearance of the peritoneal sac, and of the several parts which cover it.

If the hernia be very recent, the sac will, in all probability, be very thin; but as M. Breschet has also observed, it may be occasionally formed of many laminæ.

" Le sac peut être formé de plusieurs feuillets membraneux appliqués les uns sur les autres, ou n'offrir que le péritone seul. Alors il est transparent, mince, et il devient difficle de le distinguer de l'intestin, si ce n'est par les vaisseaux superficiels qu'on voit se répandre sur sa surface. Chez un sujet M. Charles Bell a rencontré le sac d'une telle ténuité et transparence, qu'après la réduction de l'intestin, la sériosité sortant de l'abdomen, remplit le sac et le fit ressembler à une hydatide.

" Les différentes parties de la poche, dont nous parlons, n'ont pas la même épaisseur; son col est souvent épais, ferme, résistant et dur, comme cartilagineux, tandis, que son corps est mince et transparent.

" Le sac herniaire peut aussi quelquefois ácquérir une grande épaisseur, et devenir cartilagineux et même osseux, ainsi que les observations suivant le démontrent."

The observations which M. Breschet has made on the sac, are proved to be correct, by the preparations of hernia in the Anatomical Museums of London. Sometimes, the peritoneum is so much thickened that several successive layers may be dissected, by raising the membrane with the forceps. The last layer has been found so strong and tense, that it has been difficult to catch it with the forceps and raise it up, while in other cases it has been so thin as to appear like an hydatid, and at the same time, so transparent as to allow the dark colour of the gut to be seen.

M. Breschet has given us a curious example of the thickened sac, in a patient operated on by M. Dupuytren. It was necessary to take a pair of scissars to cut the sac, which in some

places had become as thick and firm as the cartilages of the eyelids. The following is a sketch of the case :—

A woman, 40 years of age, who said she had never had any hernia, but had only complained of pain behind the crural arch, whenever fatigued, or making any efforts, after a violent fit of coughing, perceived a hard and painful tumor in the groin. The symptoms of strangulation came on, and she was operated upon by M. Dupuytren.

" Une incision cruciale fut faite à la peau. On disséqua le tissu lamineux, et on arriva bientôt au sac ; on l'ouvrit par ponction : beaucoup de sérosité rougeâtre en sortit ; puis il fut incisé crucialement. Il était si épais, que de fort ciseaux le divisaient avec difficulté. Ses angles se renversaient en formant des plis arrondis et durs, ressemblant parfaitement aux cartilages tarses des peupières. Cette épaisseur du sac indiqua que la hernie était fort ancienne, et fit douter que la malade eût dit vrai, en prétendant n'avoir jamais aperçu sa hernie avant l'étranglement."

We think M. Breschet was correct in conceiving that the patient had hernia previous to the strangulation.

The next case which our author gives is more uncommon, Ossification of the sac. The patient was a woman of sixty-nine years of age, who had long had a femoral hernia, which at last became strangulated. The operation is thus described :—

" Après avoir fait un pli transversal à la peau, et l'avoir divisé perpendiculairement, on incisa avec la sonde cannelée et le bistouri plusieurs couches celluluses ; avec les pinces à disséquer, et le bistouri, on en enleva de petites portions pour parvenir plus facilement dans le sac, d'où s'écoula un demi-verre d'une sérosité sanguinolente ; on incisa alors la lèvre interne de la plaie à l'aide d'un bistouri porté de dedans en dehors, et avec la pointe duquel on perça d'abord le sac, puis la peau. Pour la lèvre externe, on commença l'incision par son bord, et on la prolongea, en incisant en même temps la peau et le sac jusqu'auprès des adhérences de celui-ci avec les parties sorties : là on le trouva ossifié dans plusieurs endroits ; il y avait même des portions osseuses d'une assez grande étendue."

It is unnecessary to give more examples of the various degrees of thickness of the sac. But we must recollect, that however thin the body of the sac may be, the neck is always thickened and of sufficient strength to produce strangulation ; for it will be presently shewn that the cases by M. Breschet corroborate the opinion given by Mr. Charles Bell, in his Surgical Observations, that strangulation of the gut depends upon the change that takes place in the intestine, and not on any change of the ring, through which it has passed.

There is a point of not less importance to be considered before the operator has reached the sac—the state of the parts external to the sac. Every one knows that the layers of fasciæ depend upon the time the hernia has existed, but, besides the recollection of the several layers, there are many other circumstances to be remembered. We have seen an inguinal hernia obscuring a strangulated femoral hernia — the instance has happened where a suppurating bubo covered the strangulated intestine. In the following case, there are some very interesting points; indeed it seems to be a question whether the symptoms were the consequence of the hernia. The symptoms previous to the operation were rather equivocal, and on death the appearances were those of common peritonitis. It will be remarked, after the bubo was cut through, that a portion of intestine lay loose in the sac, and that it went up before the stricture was cut. We insert the whole of the description, as it seems to be very similar to a case we saw some time ago.

" M. Dupuytren, s'attendant à rencontrer des complications provenant des bubons qu'avait eus le malade, redoubla d'attention, et procéda avec la plus grande circonspection. La peau ne put être soulevée à cause de son adhérence à la tumeur. La première incision fut rendue cruciale ; les lambeaux disséqués, on découvrit une tumeur rouge assez résistante, sous une enveloppe mince et membraneuse : elle fut incisée crucialement, décollée, renversée. Cette espèce de sac offrit un aspect fibreux, lisse en dedans comme un sac herniaire ; la tumeur était lisse aussi, et circonscrite dans toute son étendue. On l'isola ; sa base parut étroite et très-mobile ; elle se dirigeait sous l'arcade crurale. Cette mobilité, cette étroitesse de la base éloignait de l'idée qu'on eût pu avoir que c'était une portion d'épiploon ou d'intestin. La surface de cette tumeur fut entamée couche par couche et avec soin : on traversa une enveloppe épaisse d'une demi-ligne, d'un rouge marron, et parcourue par un grand nombre de vaisseaux, lisse en dedans, adhérente à une tumeur bosselée, irregulière, lisse, multiloculaire ; on isola encore cette tumeur, elle avait la couleur d'une portion d'intestin étranglé, mais elle ressemblait à l'épiploon. M. Dupuytren, sachant que c'était des pelotons graisseux, les écarta avec des pinces à disséquer, et trouva au-dessous une membraine épaissé, qu'on crut être le sac herniaire. Une petite incision en fit sortir une palette de pus bien lié, mêlé à un peu de sang. C'était un foyer purulent, formé dans quelques cellules sous l'aponeurose crurale. On agrandit l'incision pour mettre la tumeur à découvert ; de peur d'accident, on la déchira avec des pinces à disséquer, on en sépara les lobes nombreux, qu'on isola les uns des autres ; ils étaient enflammés, injectés, de couleur rouge-marron, très-friables, unis par du tissu lamineux, serré, dans lequel se distribuaient les vaisseauz qui se portaient aux différentes lobules. C'était un ganglion lymphatique, enflammé, tumefié, qui avait

pris beaucoup de développement en largeur, ne pouvant pas s'étendre aussi facilement dans un autre sens, par la résistance de l'aponeurose crurale. On en écarta les débris ; on chercha profondément du côté de l'arcade, et l'on aperçut une surface convexe, lisse, à base large, mais peu saillante, de couleur violette. Le doigt y sentit de la fluctuation, et M. Dupuytren annonça que c'était le sac herniaire ; il le pinça et incisa en dédolant cette espèce d'ampoule, dont il s'écoula une petite quantité de sériosité sanguinolente très-colorée. L'incision agrandie crucialement, on découvrit au fond du sac une substance de teinte violacée, marbrée, à parois épaisses, molles ; c'était une portion d'intestin pincée, entièrement vide, parce que la compression avait été assez forte, assez exacte pour empêcher les gaz ou les matières fécales de s'y engager. On n'en voyait tout au plus que cinq à six lignes de large sur un pouce de long ; on eût dit, pour la forme, l'extrémité d'un large doigt de gant. Un premier débridement opéré avec le bistouri droit boutonné, en haut et au dehors, n'étant pas suffisant, M. le professeur Dupuytren porta sous l'arcade un bistouri courbe, et fit un peu plus en dedans une autre petite incision, dans la même direction que la première. Alors, afin de voir au fond de cette cavité, le sac herniaire fut tendu dans trois directions, à l'aide de pinces à disséquer ; mais quand on voulut examiner l'intestin, il rentra dans la cavité du bas-ventre."

The cases of hernia complicated with enlarged inguinal glands are so very common, that it is not necessary to give new examples ; but we shall here quote from M. Breschet, some cases of encysted tumors covering the sac. In one case, a small tumor was found which was at first mistaken for the sac containing the gut, but on being punctured, there was nothing found in it but serum.

" La peau qui recouvrait la tumeur, fut divisée ainsi que le tissu lamineux, sous-cutané, l'aponeurose et le tissu sous aponeurotique ; toutes ces parties furent disséquées par couches ; un petite kyste séreux, à parois transparentes, développé au-devant du sac, qu'on eût pu prendre pour le sac même, fut reconnu et ouvert avec la pointe du bistouri ; deux cuillerées à-peu-près de sériosité s'écoulèrent. Derrière ce kyste était placé le sac ; il fut incisé."

Within this there were three inches of intestine. We have another case nearly similar given, where the same difficulty was met with ; and on the death of the patient it is remarked, that the herniary sac was surrounded with lymphatic glands. " Le sac herniaire était entouré des glandes lymphatiques adhérentes et recouvertes par la membrane que l'on avait pris pour le sac en premier lieu." It occasionally happens that there are not only cysts over the sac, but even tumors by the side of it.

" Une incision cruciale faite à la peau, l'on disséqua le tissu lami-

neux. Une artériole ouverte fut liée à ses deux bouts; on arriva à un kyste situé au-devant de la hernie; on l'ouvrit d'abord par la ponction, puis crucialement: au fond, on aperçut une tumeur à parois fibreuses, élastique, formée par le véritable sac herniaire; de son côté interne s'élevait une éminence de la grosseur d'une noix ordinaire, parfaitement transparente, et semblable à une grosse hydatide."

In another case operated on by M. Dupuytren, there was more difficulty in distinguishing the tumor from the hernia. The internal part of the membrane forming the tumor, was smooth, thick, strong and fibrous. It could be traced under the crural arch, and upon being opened, a yellowish transparent fluid escaped; but on introducing the finger into the cavity, nothing was found in it. A tumor was then perceptible, situated more deeply, which was the herniary sac.

" Une incision cruciale fut pratiquée à la peau; le tissu lamineux sous cutané étant incisé, une membrane lisse, épaisse, tendue, fibreuse, fut mise à découvert. Elle contenait un liquide, se dirigeait sous l'arcade crurale; tout portait à croire que c'était le sac herniaire. Une légère ponction donna issue à une cuillière d'un liquide jaunâtre, transparent. Le sac, qui avait une demi-ligne d'épaisseur, fut fendu crucialement! le doigt, introduit jusqu'au fond de cette poche, reconnut qu'il ne contenait rien, mais qu'au-dessus existait une autre tumeur plus volumineuse, qu'on ne pouvait confondre ni avec l'intestin, ni avec l'épiploon. Cette tumeur offrait inférieurement de la fluctuation: l'on pensa qu'on n'avait ouvert qu'un faux sac, situé entre le fascia-lata et le repli plus profond que M. Astley Cooper et M. Lawrence appellent fascia-propria. Le véritable sac, très-épais aussi, fut incisé inférieurement; il contenait un peu de liquide séreux, sanguinolent, et environ quatre ou cinq pouces d'intestin rouge, foncé, tendu."

This was a case which would have been very puzzling to a young surgeon. We shall extract the note of another case as a contrast to the two first; for here the inequalities of the surface of the sac might have been mistaken for small tumors on its surface.

The herniary tumor was of a very irregular form, about the size of two fists; its surface was uneven and knotty like a schirrous gland. A fluctuation was felt in the tubercles on the upper part of the tumor. Upon cutting into one of the projecting points, a fluid was thrown out with some force. A second eminence was cut into, and then more serum flowed, so that the bulk of the tumor disappeared. On putting the finger into the first cavity, some omentum was found, and a membranous band was felt, separating the two portions of the sac

from each other. On cutting through this, a turn of intestine was found.

" Elle avait à l'aine droite une tumeur d'une forme tout-à-fait singulière, de la grosseur des deux poings réunis, s'étendant près du tubercule supérieur et antérieur de l'os coxal, et à la partie moyenne de la hauteur de la grande lèvre droite ; cette tumeur avait au moins trois pouces de hauteur ! sa surface était inégale et bosselée comme une tumeur squirrheuse des ganglions lymphatiques de l'aine. La peau n'avait pas changé de couleur, et n'était point adhérente. Les tubercules formant le sommet de la tumeur, offraient de la fluctuation, mais ne paraissaient pas communiquer ensemble. La base se rattachait à la partie moyenne de l'arcade crurale. Après avoir divisé la peau, et le tissu lamineux, on arriva, par une légère ponction, dans la cavité d'une première bosselure. Il en sortit de la sériosité sanguinolente, s'élançant en un jet de la hauteur d'un pied ; l'autre saillie, séparée de celle-ci par un enfoncement très remarquable, ne se vida pas, ce qui prouva qu'elles ne communiquaient pas ensemble. Une autre incision fut faite à la seconde bosselure, de la cavité de laquelle il sortit également un jet de sériosité sanguinolonte : les deux tumeurs s'affaissèrent, et l'on ne vit point les parties qui formaient la hernie. On agrandit d'abord l'ouverture de la première bosselure. Le doigt introduit rencontra et fit sortir l'épiploon, puis se montra une bride qui séparrit cette poche d'avec la deuxième. Une sonde de femme introduite ne put pénétrer d'une cavité dans l'autre ; alors M. Dupuytren, à-l'aide d'un bistouri boutonné concave, coupa cette bride falciforme, dont la section produit un bruit très-distinct. Des lors le liquide de la seconde poche passa dans la première ; il en sortit même du sang noir et en caillot. Dans la première se trouvait l'épiploon, dans la deuxième existait l'intestin, qui en passant sous le bord libre de la cloison, la fermait et empêchait toute communication entre les cavités."

These are some of the difficulties, but not all. Those who have not had an opportunity of seeing many operations, but who are satisfied with the plain and simple rules laid down in books for the performance of the operation of femoral hernia, will smile at its being said that there is any difficulty in recognising the OMENTUM. But we are not ashamed to confess, that we have had some difficulty in determining whether the mass which is sometimes seen immediately under the fascia, be omentum or fat, indeed we see that the French operators also confess the difficulty.

" Elle offrit de particulier une membrane accidentelle, extrêmement fine, au-dessous de laquelle était un tissu adipeux, qui simulait assez bien une hernie épiploïque. Un examen attentif fit voir que cette membrane était accidentelle, et que le véritable sac herniaire se trouvait situé plus profondément."

There is also a case in which M. Dupuytren operated, where it is remarked that a part external to the sac was very like the omentum. When the sac is very thin and so transparent as to allow the colour of the gut to be seen, and when there is a quantity of fat lying over it, the whole has so much the appearance of omentum and intestine, that it requires considerable confidence to puncture the shining membrane which forms the sac. This question has made a deep impression on our minds, for we have found on dissection, a portion of omentum lying quite exterior to the sac. It was in a case of old hernia, where the sac was at one point apparently absorbed, so as to permit the escape of a portion of the omentum which had been originally in the sac. Though we have seen this, we cannot give entire credence to the case related in the last Edinburgh Journal, where it is said that a portion of the omentum of an inguinal hernia had become united to a portion of the omentum of a femoral hernia. It is not very probable that two sacs should be absorbed or torn, so as to allow their contents to escape, and that the fasciæ which are between the two sacs should also be absorbed so as to permit the portions of the omentum to adhere to each other. We suspect the operator has been mistaken. We have known a young surgeon, in his first operation, take hold of the fat and cellular membrane, after the intestine was reduced, and say to his senior, what shall I do with the omentum?

The next point of difficulty is on opening the sac, to satisfy ourselves that it is really the peritoneal sac which we have cut. It is generally said that we know when we have opened the sac by the fluid which escapes. Cases have been already given where cysts containing fluid were opened, and still they did not form the herniary sac. In some cases there is an effusion between the false sac and the true sac, and when that takes place, it requires great confidence to proceed with the operation. It as frequently happens, that there is no fluid between the sac and the intestine. To prove that these difficulties are not ideal, we shall quote some cases.

In page 53, M. Breschet details a case, where after three distinct membranous sacs were dissected up, each resembling a herniary sac, the operator came at last to a tumor the size of a large nut, and in every respect so similar to the intestine, that he at first hesitated to open it, but dissected round it in the usual manner, and endeavoured to reduce it; but now he discovered that this was a portion of the sac, for the fluid contained in it passed up into the abdomen, leaving the parts quite flaccid. A

small portion of intestine was felt adhering to the internal surface of the sac.

" Les téguments furent incisés dans l'étendue de trois pouces, suivant la direction de l'arcade crurale ; trois feuillets membraneux, distincts les uns des autres, et resemblant à autant de sacs herniaires, furent ouverts au moyen d'un bistouri conduit sur une sonde cannelée on découvrit alors une tumeur du volume d'une grosse noix, lisse, polie, humectée, rénittente, et présentant un aspect tellement semblable à celui de la surface externe de l'intestin, qu'on hésita à décider si c'était véritablement lui qui se présentait ; dans le doute, on débrida de la manière accoutumée, mais sans toucher à cette tumeur ; on essaya la réduction. Ce ne fut qu'après cette partie de l'opération, qu'on reconnut que ce qu'on avait pris pour l'intestin, n'était autre chose que le sac herniaire lui-même ; car, au lieu de rentrer, cette tumeur se vida presque en totalité. Une petite portion, qu'on reconnut appartenir à l'épiploon, resta adhérente à l'intérieur du sac. C'est cette même portion qui, avant que la hernie ne s'étranglât, formait la partie irréductible de la tumeur : on laissa le sac intact ; on pansa la plaie comme à l'ordinaire."

A case somewhat similar is given by Mr. Charles Bell :— " The surgeon operated with great deliberation and very successfully ; with the blunt hook the several layers were raised up and dissected off. At length the sac assumed a transparent blackness. A gentleman present said it was the intestine." The surgeon supposing this to be really the case, reduced both the sac and the intestine. The patient did very well. The same author has given several cases nearly of the same kind. M. Dupuytren operated on a case somewhat similar, in which we think great judgment was required.

" On arriva à un sac de couleur bleuâtre, lisse, offrant de la fluctuation. On l'incisa et il en sortit un jet de sériosité sanguinolente ; l'ouverture fut agrandie. Autour de ce sac était une tumeur dure, rénitente, ayant à sa surface une multitude de franges, et offrant un aspect fibreux. Cela ne ressemblait en rien, ni à l'intestin, ni à l'épiploon. Etait-on dans le sac herniaire, ou bien dans un kyste accidentel ? le doigt, introduit dans le fond, trouvait un sorte de cul-de-sac, et il n'y découvrait ni d'étranglement, ni une ouverture de communication avec la cavité abdominale. M. Dupuytren vit bien qu'il n'avait pas encore intéressé le sac herniaire ; il fit une légère ouverture à la surface du corps arrondi, situé au fond de la première poche. Ayant divisé un feuillet, il sortit un peu de sang, et l'on en vit de coagulé, mais en petite quantité. Ce qu'on venait de diviser était le véritable sac herniaire, qui adhérait à l'intestin dans une grande partie de son étendue. Les adhérences furent détruites avec le doigt, et alors parut l'intestin lui-même ; il ne formait pas une anse complète, mais une partie de son diamètre était pincée."

We shall here add the notes, which we made upon an operation, at which we assisted. "The patient is sixty-three years of age. The tumor has very much the appearance of an inguinal hernia. It is difficult to get any information from the patient, as she is slightly delirious. She says it came down while she was retching. She has been very sick, but she is not so now; her pulse is small, her tongue parched, the belly not very tender but painful to the touch. The tumor is large, and the integuments are inflamed.

The first incision was made through a portion of the integuments, which was held between the fingers and thumb. On this being done, the fascia superficialis was seen forming a cap. On cutting through this, a second fascia was seen, and very much resembling a herniary sac; this was, however, carefully cut through, and then the true sac was seen, but resembling the intestine very much. The surgeon being possessed of that confidence which hard study inspires, cut this also. We must confess that we thought the intestine had been cut into, for the appearance which presented was very similar to the valvulæ conniventes; but on putting the finger upon this, it was very easily broken down, so as to afford a view of a small knuckle of intestine, which lay deep under the arch. The substance which covered the gut was not omentum, but a quantity of bloody serum mixed with coagulable lymph.

It is generally said that the intestine may be distinguished by the appearance of the vessels on the gut; but we seldom see the gut in such a state, as to enable us to observe the course of the vessels; it is either bloated, or covered with a layer of coagulable lymph mixed with bloody serum. There are many examples of this given by M. Breschet. In one case, M. Dupuytren found the intestine covered with a sort of false membrane:—"Le sac contenait de la sériosité dans laquelle n'ageaient des flocons albumineux et une trés petite anse d'intestin grèle recouvert d'une espèce de fausse membrane." In another we have an example of the difficulty of recognizing the omentum:—"Ces adhérences étaient etablies au moyen d'un tissue lamineux très épais, contenant dans ses vacuoles un fluide sérenx. Cette membrane celluleuse ainsi enfeltrée en avait d'abord imposé pour la presence d'un portion d'épiploon."

We hope that the necessity of opening the sac and cutting the neck of it, is now fully established in this country. It is a point much dwelt upon by Mr. Charles Bell; and M. Breschet quotes him, as the English authority upon the question, in opposition to the opinion of Mr. Cooper:—"M. C. Bell a publié une observation de hernie crurale chez un femme où l'étran-

glement existait au col du sac, qui embrassait tellement les parties qu'il fut très difficile à l'opérateur d'introduire un soudre cannelée. Les observations sur ce genre d'étranglement ne sont pas très rares, et un fait très curieux s'est presenté dernièrement à M. le professeur Dupuytren. Il indique le danger qu'il resulte de la reduction par le taxis, ou sans ouvrir la tumeur et le sac, lorsque la compression est élévée par le collet de cette poche." And here, as a proof of this, M. Breschet gives certainly a very extraordinary case. We must confess, even though M. Dupuytren was successful in this case, that we think his confidence in his diagnosis amounted almost to rashness.

Paul Michel, when twenty-three years of age, in lifting a heavy burden, experienced a sudden and violent pain in his groin, and at the same moment he perceived a small tumor about the size of a nut in this part. Twenty-eight years after this accident, although the tumor had not increased sensibly, and was easily reducible by the patient himself, he perceived it to increase and to cause a slight pain. On the 1st December, 1818, colics, vomitings of yellow or green matter, and suppression of the usual alvine evacuation supervened. Three days afterwards, when he came into the Hôtel-Dieu, the tumor was of the size of a pigeon's egg, shining, and was augmented by any efforts to cough. The patient exhibited all the signs of strangulation. His pulse was small, frequent and hard; his features somewhat languid, but not sharp (grippée); he perspired frequently, but for short periods only. He was put into the warm bath, and while there the tumor went suddenly up into the abdomen. On the fourth day, he still had no evacuation per anum. On the sixth day, a little feculent matter was voided, but the other symptoms continued. On the eighth day, M. Dupuytren wished to perform the operation, although the abdomen was neither tense nor painful:—" L'on esperait que la hernie sortirait de nouveau." On the twelfth day, in consequence of the increased violence of the symptoms, the operation was agreed to by the patient. Two methods of performing the operation, says M. Breschet, presented themselves—the one, to cut into the abdomen above Paupart's ligament, upon the point to which the patient referred his pain, and the other, the usual operation for femoral hernia. The first was abandoned on account of the long existence of the strangulation, and the danger of destroying the adhesions which had taken place, the latter was preferred. The fascia superficialis, the fascia lata, and the crural arch were cut, and upon the finger being introduced two inches beyond the arch, a hard round elastic body was felt, to which the patient referred

his sensations. Some threads of adhesion, aided by the efforts to cough, enabled M. Dupuytren to draw this tumor out of the abdominal cavity. A slight puncture was made, which was followed by a spurt of red liquid. The puncture was enlarged crucially. A turn of the intestine was now seen; the stricture was cut, and the part was reduced. Five minutes after the operation, wind passed by the anus; twenty minutes after, the patient had a copious stool. On the sixteenth day, the patient was dismissed cured. There are two other cases given, in which M. Dupuytren's boldness was even more displayed; for he was obliged to operate on the two sides successively, the patients having a reduced hernia on each side, and unable to say on which side the pain was greatest. The event of these cases is not given.

"Ce cas était tout-à-fait semblable à deux autres, qui se sont présentées à M. Dupuytren; le seul avantage qu'on avait ici, c'est qu'on savait de quel côté existait l'étranglement, tandis que M. Dupuytren fut, dans les autres circonstances, obligé d'opérer successivement des deux côtés, les malades ayant deux hernies réduites, et ne sachant dire de quel côté les douleurs étaient plus vives."

There is a point which we do not find noticed by M. Breschet, but which is of the utmost importance in the operation of the taxis,—the size of the herniary tumor depending principally on the quantity of serum in the sac. This has been particularly noticed by Mr. Charles Bell, in his Surgical Observations. From the note which we made of the following case, some notion of the importance of the remarks may be given:—"Before operation the tumor felt as if there were two distinct portions of gut in the sac, the one smaller and firmer than the other; the smallest portion was at the neck of the sac, and felt much like a gland under the intestine. The appearances during the operation explained this. The sac was of the shape of a pear, and very large, in consequence of there being a great quantity of serum within it. The portion of intestine was very small, and lying immediately under the crural arch. Had the serum which was in the sac been pushed back into the abdomen by the operation of the taxis, then the surgeon would, in all probability, not have thought himself authorized in performing the operation; for the sac had so much the feel of a full intestine, that when it was emptied, the strangulated gut would have felt like an inflamed gland.

We have little doubt, nay we are certain, that in such a case the sac is sometimes emptied by the operation of the taxis, and the strangulation of the intestine continues. We recollect, during an operation, that on the first cut through the integuments, the

patient called out, " Oh! it has started ;" and then, there certainly was a considerable diminution of the tumor, but the operation was proceeded in, and the intestine was found completely strangulated.

It is possible that a second hernia may be found within the first. M. Breschet has given no cases of it. We do not suppose that it is very likely to happen in the femoral hernia ; but so likely is it to happen in congenital hernia, that we are surprised that some of the first surgeons in London, should deny the existence of that species of hernia described by Mr. Hey, where a sac passes down into the tunica vaginalis testis, forming a sort of double congenital hernia. We have seen a beautiful example of that species of hernia, in the possession of that very eminent surgeon, Mr. Dalrymple, of Norwich ; and in the museum of Mr. Bell, there is a specimen which removes all doubt of the question ; in this a portion of omentum had descended into the tunica vaginalis, and subsequently a distinct peritoneal sac ; so that in cutting into the tumor, the tunica vaginalis was first divided, then a portion of omentum was cut, and then the herniary sac appeared.

The state of the intestine is particularly dwelt upon by M. Breschet, and he gives us some admirable cases from the practice of M. Dupuytren, illustrative of the changes which take place in it. In this country, the distinction has not been sufficiently made, between the gut which is detained in the sac, and through which there is no passage of feculent matter, and that state of the intestine in which there is actual obstruction to the circulation. The French have called the first state *engoument ;* but M. Breschet goes farther, for he makes the distinctions more complete, and he gives those of Mr. Charles Bell ; indeed, he uses his very language.

" L'intestin, renfermé dans un sac herniaire, peut se trouver dans quatre conditions différentes.

" 1°. Le sac contient, soit une anse d'intestin, soit un appendice naturelle ou un diverticulum, soit enfin une partie seulement de son calibre. Les fonctions digestives continuent à s'exercer régulièrement, et les matières parcourent librement le canal alimentaire.

" 2°. L'intestin est renfermé dans le sac et s'y trouve retenu par des adhérences ; mais il n'en exécute pas moins ses fonctions.

" 3°. Il est retenu dans le sac, s'y trouve incarcéré, ce qui dépend de sa distension ou du développement de quelques-unes des parties déplacées ; mais il n'y a pas d'étranglement ou de compression sur les vaisseaux sanguins du canal alimentaire, ni d'obstacle au cours des matières.

" 4°. L'intestin est étranglé ; et, dans cet état, les matières ali-

mentaires ou excrémentitielles ne peuvent point parcourir le caual; il se fait un engouement; la circulation sanguine n'a plus lieu dans la portion de l'intestin comprise dans le sac, et il existe un danger imminent de gangrène, ce qui constitue essentiellement l'étranglement.

The distinctions which M. Breschet has made of the state of the gut into "étranglement aigu" and "étranglement chronique," are similar to the terms strangulation and incarceration, of Mr. Bell. He also appears to agree entirely in the view which Mr. Bell has taken of the cause of strangulation, and of the danger of small herniæ, being soon strangulated, in consequence of the gut being quickly filled by its own secretion; and of the symptoms of danger, and of the necessity of operating in a very early stage.

"M. Charles Bell (1) pense que l'étranglement résulte de l'angle nouveau formé par l'intestin renfermé dans le sac, et que le danger provient de la formation de cet angle, par lequel les matières sont arrêtées. Il croit aussi que dans cet occurrence il se fait dans l'intestin une sécrétion qui facilite l'engouement et augmente le danger. C'est de cette dernière circonstance que provient le danger des petites hernies, et il doit augmenter en raison du délai que l'on met à opérer. Suivant le chirurgien anglais, tant que nous sommes conduits à supposer que l'intestin est simplement rempli de matières fécales qui ne peuvent ni augmenter ni diminuer, nous croyons pouvoir temporiser. Mais si nous savions que lorsqu'une petite portion d'intestin est retenue dans un étranglement, elle se remplit alors par le produit de sa propre sécrétion, ce serait sans doute un motif de plus pour en venir très-promptement à l'opération."

The question of what is to be done with an intestine which adheres to the sac, is still undetermined. Some surgeons have advised the stricture to be cut, and the intestine to be left down; others have proposed to free the gut from its adhesions, and to reduce it. No surgeon who has operated much, will lay down the latter proposal as a distinct rule; for, in fact, it would be impossible to follow it in practice. The difficulties will be made more apparent by the relation of one or two cases. In the following interesting case, there was, during the operation, one of those cysts which puzzle the operator—the omentum and intestine were both adherent to the sac. M. Dupuytren, during the operation, cut only the stricture, but, on the fourth day, the symptoms of strangulation not diminishing, he cut off a portion of the intestine, and allowed a quantity of fecal matter to pass. It is rather a curious circumstance, that on the third

(1) Part II. of Surgical Observations, &c.

day the intestine went up, and came down again on the fourth day. The patient died.

" Le tissu lamineux fut enlevé par couches, ensuite on ouvrit un kiste qu'un œil peu observateur aurait pu prendre pour la cavité du sac et qui mit à découvert deux saillies arrondies, séparées par un sillon. Cette disposition donnait aux parties l'apparence d'une anse intestinale; M. Dupuytren soulevaut avec une pince à disséquer et coupant avec des ciseaux le feuillet qui formait le fond de ce kiste, pénétra dans l'intérieur du véritable sac; cette ouverture agrandie crucialement, les saillies et le sillon disparurent, et l'on put reconnaître seulement alors les complications de la hernie. En effet, une portion d'épiploon contenue dans le sac, y adhérait de toutes parts; il était d'une couleur violette, exhalait une odeur nauséabonde, et se laissait déchirer sans répandre une goutte de sang. A son centre se trouvait aussi adhérente une anse d'intestin d'un rouge foncé et offrant un faible résistance. Quelle conduite devait-on tenir? L'état des parties ne permit que le débridement, on l'opéra directement de bas en haut, avec un bistouri que dirigeait le doigt indicateur entre l'épiploon et l'arcade crurale, La malade fut pansée avec une linge fenêtre et couvert de charpie de compresses triangulaires maintenues par le spica de l'aine. On prescrivit des lavements émollients, des fomentations de même nature sur le bas-ventre, et pour boisson du petit-lait édulcoré.

" Pendant la journée qui suivit l'opération, la malade n'en éprouva pas les avantages; les lavements furent rendus sans être altérés par les matières fécales; les coliques, les nausées continuèrent, la fièvre augmenta. Le lendemain il y eut des vomissements de matières fécales très-abondants: la malade conduite au bain ne put le supporter que pendant quelques minutes.

Le troisième jour, l'appareil, étant levé, on trouva l'épiploon ramolli presque diffluant; la circonféreuce de la plaie tuméfiée sur-tout en dehors; l'intestin était rentré. Le doigt indicateur introduit dans la plaie, M. Dupuytren put s'assurer que l'étranglement n'existait plus; cependant les vomissements se répétaient, le ventre était douloureux, et la fièvre assez vive; on couvrit la plaie et une partie de l'abdomen d'un cataplasme émollient, et on continua l'usage du petit-lait.

" Il n'y eut pas de mieux le jour ni la nuit suivante.

" Le lendemain à la visite du matin, on trouva l'intestin sorti; on souleva sa paroi avec des pinces, et on en excisa une portion avec des ciseaux. Au même instant, un flot de matières bilieuses et stercorales mêlées de gaz s'échappa, mail il s'arrêta bientôt; alors on augmenta l'étendue du débridement en introduisant le doigt indicateur dans la cavité intestinale: et en conduisant par-dessus un bistouri boutonné qui coupa de bas en haut les parties opposées à son tranchant, un nouveau flot de liquides s'écoula, puis s'arrêta comme le premier."

In a case given at page 137, the intestine was left adherent to the sac; the stricture was cut, but the symptoms did not abate. On the third day, M. Dupuytren cut the intestine; a quantity

of yellow fluid similar, to the matter vomited, passed, but the patient was dying.

In another case, the stricture, the sac, the omentum and the intestine were all so matted together that there was no other way of relieving the stricture than by cutting through the whole mass.

" Le débridement parut tout-à-fait nécessaire pour détruire la cause de l'étranglement, et pour donner issue aux matières, dont il ne s'était pas épanché un atome dans le sac. Mais où debrider? Des adhérences celluleuses multipliées existaient entre le sac et l'épiploon; elles unissaient étroitement l'intestin avec l'épiploon: le procéde d'*Arnaud* était le seul practicable; il fallait débrider à-la-fois sur l'intestin et sur l'arcade."

There is a case given where the adhesions were broken down, and the intestine reduced, but the patient died. We do not mean to assert, the impossibility of breaking down the slight connections which are sometimes formed between the intestine and the sac; for we have seen it done, and the patient live. But we believe that it is impossible to reduce a gut where the adhesions are so firm, as to require the knife, unless it be such old adhesions as are found in congenital hernia.

M. Dupuytren seems decidedly in favour of cutting into the intestine when it is gangrenous; and M. Breschet is distinct in recommending the stricture to be also cut. Indeed, even though we believe that the principal cause of strangulation, is the change which takes place in the intestine, still, when we recollect through what a small opening the hernia has protruded, we must agree with him.

It is difficult to determine, during an operation, how far the gut has approached to gangrene, and when it is dangerous to reduce it. There are many rules given by different authors to determine this question, and to them we must refer; but we may remark, that there is a cause of death which is mentioned by Desault, and which has not been much attended to in this country—the loss of the natural power of the intestines when they are violently inflamed. There is also another cause which has not been mentioned by any author—a stricture formed actually in the calibre of the strangulated portion of the intestine, in consequence of being inflamed for a length of time: there is in the museum of Mr. Bell, a portion of intestine, through which a bristle only can be passed. This was taken from a patient who was operated on, eight days after the symptoms of incarceration commenced. We believe that these two circumstances are

more frequently the cause of the death of patients, who have been operated on, for hernia, than gangrene.

We are disappointed in not finding more on the subject of artificial anus; for most of our readers know that M. Dupuytren has invented a very ingenious operation for the cure of this accident. A German surgeon has improved upon the idea of Mr. Charles Bell; he proposes to attach a compress to that end of the seton which passes out by the upper portion of the gut, and then by pulling the part which comes through the lower portion, the compress will be brought up, so as to plug the opening of the upper portion of the gut, and force the matter to pass along the seton into the lower part of the intestine. The plan is certainly ingenious. We are not sure how far it will succeed in practice.

As the omentum is not so important in hernia as the intestine, surgeons have generally taken much liberty with it. It is very frequently much thickened, so much so, that it is difficult to reduce it, without enlarging the opening very much, or without using considerable violence. As neither of these can be recommended, the question comes, Is it to be cut off? We have seen so much harm ensue, evidently in consequence of handling the omentum, that we should be inclined to cut it off, were it not, that we have been alarmed by the death of patients, where this was done: but we at the same time acknowledge that we are not certain, that those patients died, because the omentum was cut off. There are several cases on record, where the omentum has been left in the wound, and the patient has done very well; indeed, a case happened not very long ago, in the country, where a surgeon commenced the operation for hernia; he got down to the contents of the sac, but finding parts in it, which he never dreamt of, he let them take their chance. Luckily for the patient, it was omentum; the whole wound granulated, and the patient did very well. M. Dupuytren has left the omentum in the wound; large suppurations have taken place, and the mass of omentum has gradually disappeared.

" La tumeur épiploïque avait déjà diminué de volume. Le 6 janvier, même état, même pansement. Le 9, l'étendue de la plaie, le volume de la tumeur avaient sensiblement diminué; même pansement. Le 15, la plaie avait beaucoup diminué en largeur, et la tumeur épiploïque était au niveau de la peau. La suppuration était, comme à l'ordinaire, peu abondante et de bonne nature: même pansement. Le 21, la tumeur épiploïque, réduite à ses éléments celluleux, avait disparu; elle n'offrait plus que sous la peau une petite saillie sensible au

toucher. M. Dupuytren fit exercer dessus, une compression avec de la charpie, et un bandage en spica. Le 30 janvier, la plaie avait beaucoup diminué ; on ne sentait plus aucune saillie sous la peau. Le 10 février, la plaie était linéaire. Le 16, la femme sortit de l'hôpital parfaitement guérie."

We add two other cases. In one of these a portion of the omentum was cut off, the vessels were tied, and the remaining part was reduced ; in the other, the adhesions were broken, and the mass returned. In both instances, the omentum was found after death, adhering to the neck of the sac.

" Quant à l'épiploon, on ne fut pas d'avis de le faire rentrer entièrement, sans doute parce qu'il y en avait au dehors une trop grande quantité. On lia donc plusieurs artères vers le milieu de la portion sortie ; on retrancha à-peu-près la moitié de l'épiploon ; on détruisit, à l'aide de ciseaux, des adhérences anciennes que le reste de l'épiploon avait contractées avec le sac prés du lieu de l'étranglement, dans l'intention de réduire en totalité ce qui restait ; mais on ne le fit rentrer qu'en partie, sans doute parce que d'autres adhérences plus profondes, et qu'il aurait été impossible d'atteindre, en empêchèrent, ou parce que l'épiploon laissait toujours transsuder du sang ; on mit tout autour entre lui et le sac des bourdonnets de charpie, pour absorber celui qui pourrait s'écouler encore, et pour l'empêcher de pénétrer dans l'abdomen ; enfin, pour mieux fixer l'épiploon à la plaie, on enveloppa les ligatures avec un linge, l'épiploon fut recouvert d'une compresse fenétrée."

This patient died ; and upon examination the omentum was found adhering to the wound. A portion of the arch of the colon, which had been dragged by the omentum to the edge of the wound, was gangrenous for about two inches in extent. In the other case, the omentum adhered to the neck of the sac.

" Que fallait-il faire de l'épiploon ? Le laisser au dehors, le couper ou le lier ? Tous ces procédés offraient des inconvénients ; on se décida donc à le réduire. Mais, comme nous l'avons déjà dit, plusieurs adhérences existaient ; les unes légères, situées loin du collet du sac, furent détruites avec le doigt ; une autre plus forte, correspondant au collet lui-même, fut respectée ; car, en repoussant l'épiploon, celui-ci entraîna le collet, et rentra avec lui."

The French surgeons are evidently in favour of operating early. M. Breschet says, when once the existence of a strangulated hernia has been fully recognized, and the usual methods of reduction by taxis have failed, no time ought to be lost, for it is not from the operation that the danger is to be apprehended, but from the delay previous to its performance. We agree with him fully, but the difficulty is this :—we see a patient with symptoms of strangulation for eight days—the operation is performed, and the gut is not found gangrenous ; while, in a case

where the same symptoms have lasted only for twelve hours, the gut is found to be quite mortified. Upon this question, M. Breschet quotes Mr. Charles Bell.

" Le même auteur dit, qu'un point principal dans l'appréciation des symptômes de la hernie étranglée est de ne pas juger du danger d'après leur intensité, et de ne point se régler sur ces phénomènes pour se décider à opérer ou pour temporiser. La plupart des symptômes n'ont souvent aucun rapport avec l'urgence de l'opération, parce qu'ils ne dépendent point de l'état de l'intestin étranglé, mais bien de la distension générale et de l'irritation du canal digestif au-dessus de la hernie. Les coliques, les vomissements, la tension du ventre, et même l'expression de la figure, la fréquence et la faiblesse du pouls tiennent à l'état général des intestins; et nous observons, tantôt ces symptômes très-développés, quoique l'intestin contenu dans le sac soit encore dans son état naturel; tantôt, au contraire, ces symptômes sont peu remarquables par leur force; et cependant l'intestin est sur le point de tomber en gangrène. Suivant M. Ch. Bell, on doit s'attacher beaucoup moins à observer ces symptômes qu'à étudier avec soin les différentes états de la tumeur. Il faut s'accoutumer à déterminer d'après le lieu où elle existe, d'après son apparence, sa dureté, etc. si l'opération est nécessaire ou non; et lorsqu'on a reconnu que la tumeur est une hernie, qu'il se manifeste des signes d'étranglement, que le canal est obstrué, le mieux est de faire promptement l'opération (1).

In the description of the operation, we are happy to see M. Breschet is not an advocate for that of Gimbernat, which has obtained so much credit in London, and the dangers of which we endeavoured to shew in our fourth number.

" Si Gimbernat a des partisans pour son procéde, il a aussi des critiques et dés adversaires; parmi ces derniers on compte sur-tout deux très-grands chirurgiens, MM. Dupuytren et Astley Cooper. Ils font les reproches suivants à ce mode d'opérer.

And here M. Breschet gives the objections of those gentlemen, but which it is unnecessary to repeat.

M. Dupuytren cuts the stricture upwards and outwards, and operates with a curved bistoury, which cuts upon its convex surface. This M. Breschet considers as a great improvement on the instrument. Our author does not recommend Mr. Cooper's method of operating. He says, " M. Astley Cooper, loin de simplifier l'opération de la hérnie fémorale, l'a rendue plus longue et plus difficile." And after describing Mr. Cooper's method, he continues:—" M. Astley Cooper fait ainsi deux opérations pour une et par une double incision; il affaiblit

(1) Part II. Surgical Observations, etc.

beaucoup trop le bord inférieur du muscle costo abdominal et favorise le dévelopement ultérieur de la hérnie."

A considerable portion of the Essay is occupied in the description of the anatomy of the parts; but as we went fully into that subject in our number for August, we shall not again return to it. We may only remark, notwithstanding all that has been said and written on the danger of wounding the epigastric artery, that in the whole course of M. Dupuytren's practice, M. Breschet had never known an instance, where the artery was wounded. We believe that there have been only one or two cases in London, where the artery has been *said* to be divided.

We are conscious that we have not done justice to the excellent Essay of M. Breschet, even in this long article; we trust that the importance of the cases will be an apology for its length. In these Essays, we have a proof how much fairer a picture of the state of English Surgery, may be given by a foreigner unconnected with any school, than by one who has his prejudices and his interests biassing the opinions he delivers to the world.

ART. IV. *Manuel d'Anatomie, contenant l'Exposition des Méthodes les plus avantageuses à suivre, pour disséquer, injecter, conserver les parties qui composent le Corps de l'Homme. Par J. N. Marjolin.* 2 tom. 8vo. Paris, Méquignon-Marvis, 1815. pp. 1188.

VESALIUS and some other authors have united in their works, the descriptions of the various parts of the body, with the rules to be followed for bringing these parts into view, and displaying them by the art of dissection. The greater number of modern anatomists have not followed this method. We have systems of purely descriptive anatomy from the pens of Soemmering, Boyer and Bichat, authors who have begun their descriptions as it were upon the dissected body, and carefully avoided all mention of the manner in which they had first of all separated and set up to view the organs which they have so masterly pourtrayed. A pretty numerous set of authors have of late been endeavouring to supply this deficiency in the modern anatomical systems; and we have placed at the head of this article the title of the work, which we regard as by far the best which has yet appeared upon Practical Anatomy, as this branch of the science has been called. We earnestly recommend Professor Marjolin's Manual to those of our countrymen who may be about to take advantage of the excellent opportunities of study-

ing anatomy, which are afforded in the French capital; and who may be unwilling to waste their time in the immethodical and almost aimless dissections of those who cannot command the assistance of an intelligent and assiduous demonstrator. We should rejoice indeed to recommend this work to those who are attempting to pursue the study of anatomy at home; but from the limited opportunities of actual dissection to which access can be had in this country, such a recommendation would be little less than an insult.

There is no subject which lies more within our province as Journalists of Foreign Medicine and Surgery, than the manner of conducting the various branches of medical education. And, as among these branches there is none which can pretend to surpass anatomy in importance, we should think it incumbent on us at all times, to take notice of any remarkable circumstance connected with the teaching of that science in foreign schools. At present, we call our readers, and we should be glad could we incite not only our ordinary readers, but all reflecting men and all friends to humanity and to the improvement of human knowledge, to the consideration of a deeply interesting question concerning the study of medicine, and especially of anatomy.

Those who imagine that the whole object of medicine is to cure diseases, have adopted a very false and contracted notion indeed. Besides the curing of diseases, medicine has two other great objects in view. The one is the prevention of diseases, and the other, the solution of certain most important questions connected with the administration of justice. In the former case, the medical practitioner takes his place by the side of the legislator; points out to him the regulations necessary to be followed for the preservation of the public health; affords him a variety of information regarding the causes affecting population, regarding the physical education of children, the healthfulness of different countries and districts, the wholesomeness of different kinds of food, the means of preserving the effectiveness of fleets and armies, the establishment and management of hospitals, and the construction and economy of prisons; he indicates to him the means by which the causes of pestilential diseases are to be extirpated, and the precautions by which new contagions are to be averted from the shores of his country. In the second case, the medical practitioner is called into the courts of justice, not so much in the character of a witness as in that of a judge; for it is in a great measure according to his opinion that numerous and weighty questions in the administration of civil and criminal law are decided. These

questions respect marriage and divorce, pregnancy, delivery, and infanticide, the duration of life, the proofs of insanity, and the crimes of rape, homicide, and murder; and are of such a nature, that without the aid of medical knowledge, they would remain obscure or entirely unanswerable.

Such being the vast extent of medicine, even when regarded independently of its chief object, which no doubt is the curing of diseases, some idea may be formed of the importance of medicine in a land of civilization and freedom; some idea may be formed of the dignity and high responsibility of this profession, and of the necessity of laying well the ground-work upon which a knowledge of medicine is to be founded.

Now, it is universally agreed, that the basis of all medical knowledge is anatomy. Nor can it be difficult even for those who are not of the medical profession, or who have never particularly reflected on the method of studying medicine, to see the advantages or rather the indispensable necessity of anatomical knowledge, to those who are to undertake to distinguish the different diseases to which the body is liable, and to attempt, and that often by dangerous remedies, and still more dangerous operations, the relief and removal of these diseases. Can there be any one who does not perceive at the very first glance, that the study of the arrangement and structure of the different parts of the body in the state of health, ought to precede the study of the changes which these parts undergo in disease? Can there be any one who does not perceive that when anatomy ceases to lend its support to the other branches of medicine, these lose their basis and their certitude, and consequently their truth and their utility? What would be thought of the honesty or of the soundness of mind of a man who should pretend to account for the derangements of a delicate and complicated machine, or who with ruthless hand should even attempt its reparation, who yet was completely ignorant of its structure, completely ignorant of the kind of machinery which it contained, and by which it was moved—who had never once taken it to pieces himself, nor ever viewed it taken to pieces by another person, but had merely looked superficially at the case in which it was enclosed, or seen once or twice at a distance, some of its separated wheels and levers?

The study of anatomy is tedious and repulsive; and mournful experience has proved how frequently it compromises the health and even the lives of those who engage in it.*

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* We intended to have inserted here the number of those who have of late year

Every method then, which lies within the power either of individuals or of the state, ought certainly to be employed to lessen the difficulties attendant on this study; so that those who devote themselves to the medical profession may not only be prevented from neglecting, but may even be encouraged to cultivate this so necessary branch of their education. One thing above all others is necessary to the pursuit of anatomical study, and that is, a sufficient number of dead bodies to allow every person destined for the profession of medicine to examine the structure of the body with his own hands. There is no error more fatal to the progress of anatomy, nor more calculated to assist in sending out into the world young men with a worse than imperfect acquaintance with this fundamental branch of medical knowledge, than the idea that anatomy may be learned by an exercise of the sense of sight alone; in other words, by viewing the dissections made by others, attending public demonstrations in theatres and colleges, reading books, and looking at plates, and pieces of wax and plaster. The exercise of several senses, and above all of that of touch, is absolutely necessary to the profitable study of anatomy. The student must bring into view the parts of the body which he is about to examine, with his own hands; he must touch them, weigh them, strike them, displace them, replace them, and all this many times over, before he can acquire any tolerable notion of their structure, their situation, and their mutual relations.

The other countries of Europe have felt the truth of these observations, while England alone has felt it not. France, and the different governments of Italy and Germany have long since known it as their duty to give a dignified and definite support to anatomy. England has winked at its exercise. The cultivators of anatomy are furnished over the whole continent with safe asylums at the public expence, where they may pursue

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died from wounds received in dissection; but from the difficulty of obtaining accurate returns, we are obliged to postpone it. The deaths have chiefly occurred among students, but not uniformly, as a most eminent surgeon and anatomist has lately fallen a victim to his zeal for the advancement of our science. We allude to the late Mr. Dease, of Dublin, who died from a cut received in dissecting. We do not insert farther particulars, as a very full account of the case will appear in the next volume of the Dublin Hospital Reports, drawn up by Dr. Colles, who will add to it the case of his own apprentice Mr. Hutchinson, who nearly lost his life by inflammation and sloughing of the cellular substance from the same cause.

their investigations on the dead bodies furnished to them by legal and exact regulations. In England alone, anatomy must be carried on by stealth; and its cultivators must join themselves with the lowest vagabonds, and even render themselves amenable to the laws of their country, in robbing the sepulchres of the dead.*

That the circumstances of the case call imperiously upon the British legislature for instant interference, cannot be unknown to any well informed man;† and it would require only that those who are most worthy of credit in the profession of

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* The following is the law of England on the subject of stealing dead bodies: An heir may bring an action against any one that injures the monument, &c. of his ancestors; and the coffin and shroud of a deceased person belongs to the executors and administrators, but the dead body belongeth to none. 3 Inst. 202, 203. And though the heir has a property in the monuments or escutcheons of his ancestors, yet he has none in their remains when dead and buried. The parson, indeed, who has the freehold of the soil, may bring an action of trespass against such as dig and disturb it; and if any one in taking up a dead body, steals the shroud or other apparel, it will be felony; for the property thereof remains in the executor, or whoever was at the charge of the funeral. Blackstone, Vol. II. p. 429. Thus, Thomas Middleton was indicted for feloniously stealing 50lbs. of lead, the goods of Rene de Boyville, (that is to say, the lead of his son's coffin, from a vault in Bow Church), and convicted of the same. Vide the Proceedings at the Second Sessions at the Old Bailey, in the mayoralty of Francis Child, Esq. in the year 1732.

The case, however, most in point, is that of the King v. Lynn, in the Court of King's Bench, for taking up dead bodies for dissection. The defendant having been convicted thereof, Serjeant Bond moved an arrest of judgment, on the ground that the offence was not cognizable in any court of criminal jurisdiction; and if it were any crime, it was of ecclesiastical cognizance. But the Court said that the offence was cognizable in a criminal court, as being highly indecent and contra bonos mores. And they, therefore, refused even to grant a rule to shew cause.—Vide Durnford and East's Rep. 29 Geo. III. Mich. T. Vol. II. Part VI. Page 733.

Therefore, 1. Stealing dead bodies, though for the improvement of anatomy, is an indictable offence as a misdemeanour.

2. Stealing the coffin or shroud is felony.

† In the debate in the House of Commons, on the subject of Iron Coffins, as reported in the Times newspaper, of December, 1819, Mr. Bennett observed, "That the real question was, whether resurrection men should be effectually prevented from disturbing the repose of the dead. It was a question of great importance. The numbers taken out of their graves for the purposes of dissection was enormous. He was well acquainted with the details of the subject, having, as Chairman of the Police Committee, come to the knowledge of facts which had not been made public for fear of exciting terror and alarm in the country."

the healing art, should be called upon for their evidence, to confirm every thing which we have yet said, or have yet to say upon this subject, in its fullest extent.

Perhaps some may be disposed to reply to this appeal, that notwithstanding the opportunities of dissecting dead bodies being more limited in England than in any other civilized country, yet we have to boast of some of the most skilful anatomists and surgeons who have appeared in the world. The names of the Monroes, of the Hunters, of Baillie, of Abernethy, of Cooper, of the Bells, of Barclay, are cited as proofs, not of a mere equality but of a superiority in anatomical skill above every other nation in Europe. We would ask the proposers of this objection, whether the professional excellence of these celebrated men was to be attributed to any other cause, than that from peculiar circumstances they have been enabled to engage more freely than others in anatomical researches? All those whose names are above enumerated, have been engaged in the teaching of anatomy, and have thus had opportunities of prosecuting that science to a degree which is at present totally beyond the reach of those whose good fortune does not place them in similarly favourable circumstances. But it is not the teachers only of anatomy who ought to be intimately acquainted with the structure of the body. Every one whose intention it is to practice medicine, and especially surgery, ought to possess a thorough anatomical knowledge. Those who teach anatomy are forced indeed to take the only right method of acquiring a knowledge of that science; that is to say, they make it their first object to see and handle the things with which they are required to be acquainted, and their second object to know them. To begin by affecting to know these same things by having read about them and heard them described, and then to try to see and touch them, which is the common method of pursuing the study of anatomy, is palpably absurd, and can never be attended with success.

Are there any who would reject the present appeal, on the ground that the truly polished and civilized state of this humane and religious nation forbids such cruel butchery of the human body, as anatomists would wish to be permitted to perpetrate? It was once reckoned the proof of a highly enlightened age, that the progress of superstition should be checked by persecution, and with this view the living bodies of the propagators of Christianity were exposed to the fury of savage beasts; and this was every whit as good a proof of the civilization of the age of Domitian, as the denying of human dead bodies for anatomical research is of the English humanity of the present

day. The one case presents an example of blind opposition to the purest and most elevated system of religion, the other is an equally detrimental opposition to the progress of the most humane and most useful of all the kinds of human knowledge.

Let it not be understood that by what we should judge a sufficient and just liberty of dissecting dead bodies, we should propose any thing which would outrage public decency, or even the respect due to the dead. While the anatomist is a stranger to those superstitious fears which haunt the common mind, he approaches the dead body of his fellow-man with the feeling that he himself must one day be stretched out in the same attitude of insensibility. Besides, he is about to perform no common action either of the mind or of the hand; he is about to scrutinize the fabric of organization, and to meet at every step of his intimate and toilsome search the proofs of design and of wisdom. Nor can this thought ever quit his mind, that his inquiries are not those of a vain and speculative curiosity, but that the end of them all is the relief of suffering humanity.

We have sometimes heard it said that the ministers of religion oppose themselves to dissections, and that some of them have even made such opposition the subject of their public addresses to the people. On conversing with several very respectable men of that profession upon this subject, we have found them favourable to the progress of a science in which humanity is so deeply interested. The delivery of the dead bodies for interment, after the purposes of the anatomist were attained, they considered as more than a sufficient removal of all objections on the side of religion.

On conversing with some of the most celebrated anatomists of foreign countries on the almost incredible difficulties thrown in the way not merely of anatomical discovery in England, but even of the study of what is essential to be known of that science by the physician and surgeon, the question has again and again recurred—But how come such obstacles? The answer has ever been—From the prejudices of the people. But can the government do nothing?—has as constantly been retorted. Can the government of England, a country so enlightened, and in every other respect so illustrious, do nothing; if not to encourage the cultivators of so useful a branch of knowledge, at least to furnish them with the means of carrying on their researches without molestation and without dread? The humane prejudices—the natural feelings of the people ought not to be violated.

Humane prejudices! natural feelings! Twenty, thirty, fifty

thousand of the brave fall upon the field of battle. England reckons up the number of the conquered, and coolly subtracts the thousands of her own sons whose blood has bathed a foreign soil, and whose bones are left to bleach in the wind. The public receive the estimate of blood with rapture. It is the estimate of what they have won. The youth, the vigour, and the beauty of the fallen are forgotten. The lamentations of the widow, the mother, and the sister, are lost in the sound of victory. The hour is given to madness, and midnight's darkness cannot hide the wantonness of mirth and triumph. Is the question brought forward of the propriety of dedicating to the purposes of anatomy a few of the dead bodies of those individuals who expire in the hospitals, worn out and disfigured by disease, without a relation or a friend to carry them out to the grave, and whose very names are perhaps unknown; the feeling public raise their hands in horror, and threaten with condign punishment the unfortunate anatomist, who is cursed with an enthusiasm for the cultivation of his art, and who foresees, in the researches which he is forbidden to institute, the discovery of a new and better means of relieving some excruciating or some mortal disease. How ridiculous at once, and hateful, is that affected tenderness which is ever straining at gnats and swallowing camels!

The following passages from the last Hunterian Oration, are so applicable to our present argument, that we shall make no apology for extracting them; especially as the present article may, perhaps, fall into the hands of some who are not of the medical profession, and who yet may be inclined to further the views which we are attempting to recommend.

"It is both evident to reason, and manifested by the history of medical science, or by experience, that it can only be attained and improved in one way. We must understand structure and function, and the changes produced in each by disorder and disease. There is no short cut, nor "royal road," to the attainment of medical knowledge. The path which we have to pursue is long, difficult, and unsafe. In our progress, we must frequently take up our abode with death and corruption; we must adopt loathsome diseases for our familiar associates, or we shall never be thoroughly acquainted with their nature and dispositions; we must risk, nay even injure, our own health, in order to be able to preserve or restore that of others. Yet if we do this, our profession will be held in the highest respect; not as in ancient times, merely on account of the beneficence of its object, but because it will be further perceived, that the means are adequate to its accomplishment.

"If, however, we are disposed thus to labour for the public

good, some concession, co-operation, and encouragement on the part of the public, may be by us reasonably expected. Anatomical knowledge is the only foundation on which the structure of medical science can be built. Without this, we should but increase the sufferings of those afflicted with diseases, and endanger their lives. Opportunities of dissection should therefore be afforded to us. The bodies of persons dying in the hospitals abroad are given to the surgeons for dissection, and even with the acquiescence of the public. In other countries it is considered that those who are supported by the public, when unable to support themselves, die in its debt, and that their remains may therefore, with justice, be converted to the public use. In England, however, the indigent who suffer from illness and injury are supported and relieved chiefly by the liberality of that benevolence which is so creditable to our national character; and much as I wish for the promotion of medical knowledge, I should be sorry if the bodies of the poor were to be considered as public property without reserve in our own country. For better would it seem to me, that medical science should cease, and our bodily sufferings continue, than that the natural rights and best feelings of humanity should not be equally respected in all classes of society; or that merely because persons are poor, they should be prevented from paying the last tribute of respect and regard to their departed relatives, by attending their remains to the grave. Yet if the directors of hospitals, poor-houses, and prisons, were to establish it as a regulation, that the body of any person dying in those institutions, unclaimable by immediate relatives, should be given to the surgeon of the establishment for dissection, upon his signing an obligation so to dispose of it, as to give no offence to decency or humanity, I am convinced that it would greatly tend to the increase of anatomical knowledge amongst the members of our profession in general, and consequently to the public good. Or indeed it might be established as a law, that the body of any person of whatsoever rank or fortune, unclaimable by immediate relatives, should be subjected to dissection; and thus a great public good might be obtained, without any infringement on the equality of rights. Other and better expedients may indeed be devised; and the subject is so important as to deserve general consideration.

"Yet, upon mentioning the foregoing suggestions to various persons, I have been uniformly answered, that the public would never consent to such regulations; for their effect would be, to deny the body the rite of Christian burial. But that the funeral service availeth not to the dead is made manifest, even by that

sublime ritual itself, which places before our view the valueless nature of the dead body by the most emphatic language. We therefore commit the body to the ground; earth to earth, ashes to ashes, dust to dust. That is to say, confident it must, according to the laws of nature, resolve itself into other forms, and become again an undistinguished part of the common constituent part of the universe. Religion also "doth teach us for to render the deeds of mercy" and benevolence to those that want them, which deeds cannot be properly administered to such as suffer from illness or injury, unless in consequence of our obtaining an accurate knowledge of the structure of the human body."*

The following extract is from a pamphlet much less likely to be generally read than that of Mr. Abernethy. It serves to shew the general feeling of the profession upon this subject, and also furnishes some data regarding the number of dead bodies required for anatomical purposes:—

"The performance of every operation in surgery, once upon the dead subject before attempting it upon the living, is little else than a pitiful precaution against self-accusation. To derive improvement from exercises of this kind, they must be repeated frequently. The parts to be operated upon ought first of all to be dissected on one subject, or on one side of the body; then the operation ought to be performed on another subject, or on the other side; and lastly, the parts operated upon ought to be dissected, that the faults which have been committed may be ascertained."†

Those who are disposed to take a liberal, or even a barely candid view of the present question, will naturally inquire what number of dead bodies would be reckoned necessary for the purposes of anatomy We should probably astonish some even of our ordinary readers, were we to enter on a minute answer to this question, and sum up the number of dead bodies which would be annually requisite for dissection in London, Edinburgh, Dublin, and Glasgow, as well as in many large towns, not the seats of medical schools. Perhaps as many dead bodies would be required for purposes not connected with public teaching; for instance, for the repetition of surgical operations, as for dissection and demonstration in the theatres of anatomy. Those

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* Hunterian Oration, for 1819. By John Abernethy, F.R.S. London. Longman, 1819. Page 33.

† Introduction to a Course of Lectures on the Diseases and Operative Surgery of the Eye. By William Mac Kenzie. London, Anderson, 1818. Page 23.

who have studied anatomy in the superficial manner in which it is taught in this country, can scarcely enter into the views of that science, which have dictated the following observations. "It is indispensably necessary for a surgeon," says Soemmering, when speaking of the knowledge necessary for the discrimination of the different kinds of hernia, "above all things to make himself closely acquainted with the disposition of the peritoneum in nature itself. He must for this end examine the abdomen perfectly anatomically, in the strictest manner, and at least in four dead bodies, in a male and female child, and in an adult man and an adult woman." He adds: "For however excellent, learned, and complete, even in the eyes of the connoisseur, may be the descriptions of the peritoneum, by Douglas, Winslow, Hensing, Bonn, and Haller, they are even as little sufficient as the most masterly drawings, without a contemplation of nature, to produce a clear idea of the situation, form, polish, thickness in some, and extreme fineness in other places, attachments, connections, folds, processes, substance, and other properties of the peritoneum."*

We must at present confine our estimate to the number of dead bodies necessary for the practical instruction of the students of anatomy. We shall suppose that the period of study is three years, and that in each of these years, a careful dissection is to be made of all the most important parts of the body. This will require one dead body for the muscles, a second for the blood vessels, and a third for the nerves. The viscera may be studied partly in one, and partly in the other two of these three dead bodies. Now, in the course of three years, two students will require nine dead bodies, to which we shall add a tenth, for the repetition of the principal surgical operations. Such we consider as the most moderate computation which can be made. Double the number of dead bodies which we have here taken would, we think, be little enough; but, at least, evidence of the student's having carefully dissected five entire subjects should be produced, before the granting of any diploma in medicine or surgery. Supposing then the number of students in London to be 400, the number of dead bodies required annually in this metropolis would be 600. Add dead bodies for 200 students at Edinburgh, 200 at Dublin, and 100 at Glasgow, the total number of dead bodies required annually in the empire for preliminary anatomical instruction would be 1350, to

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* Samuel Thomas Sömmering, über Brüche, Seite 150. Wien, Doll, 1812.

which must still be added 300 dead bodies annually for the repetition of surgical operations, making a total of 1650 dead bodies annually, for the use of students alone. But, supposing that there are thirty teachers of anatomy in the empire, each of them will require for his public demonstrations, on an average ten dead bodies annually, making additional 300, or a total of 1950. By the dedication then of 2000 dead bodies annually to the purposes of anatomy, the health and happiness of fourteen millions of men may be very materially promoted. And though from the novelty of such a calculation, the number of dead bodies here stated may sound as if immense, yet when compared with the annual mortality in the empire, it will appear as almost nothing.

Nor will the hospitals, infirmaries, work-houses, poor-houses, and prisons find any difficulty in furnishing the number of dead bodies required; and that without any extraordinary sacrifice of feeling on the part of the relatives and friends of the deceased. The annual number required in London, is 766; in Edinburgh, 383; in Dublin, 383; and in Glasgow, 191. Now, granting that Edinburgh and Glasgow could with difficulty supply their respective numbers, we presume that they could be furnished from Dublin and London, or even from one of these towns alone.

As the dead bodies for anatomical purposes can be derived in sufficient numbers only from hospitals, work-houses, poor-houses, and prisons, it is necessary that the schools of anatomy be in large towns; yet these schools should be in some measure removed from public view, and ought never to be suffered within the walls of an hospital. Where life has come to seek for preservation, the neighbourhood of corrupting corpses must ever be highly offensive, both morally and physically, prejudicial to the recovery of the sick, and hurtful to the usefulness of charitable institutions. The greatest decency, and even a certain secresy ought to be employed in conveying the dead bodies from the hospitals to the schools of anatomy. No dead body ought to be allowed to remain in the schools of anatomy beyond a certain number of days, after which the remains of the dead ought to be decently interred.

All this can be appointed only by the interference of Government; and as we have seen it carried on with regularity in the other countries of Europe, we hope yet to see the same advantages afforded to the profession in Britain. We earnestly call upon our professional brethren, and on all the friends of science and of humanity, to bestow a portion of their attention upon this important subject, and to exert them-

selves in promoting on every occasion, and by every proper means, the views which we have now endeavoured to lay before them.

The following are some of the heads of a plan for promoting the practical study of anatomy.

I. That in each of the hospitals, infirmaries, work-houses, poor-houses, and prisons of London, Edinburgh, Dublin, and Glasgow, a room or rooms be set apart for the reception of the dead bodies destined for the use of the schools of anatomy.

II. That into the said rooms shall be conveyed, immediately after death, the bodies of all persons admitted into the said hospitals, &c. who did not lodge at the time of their admission, with the clerk or other receiving officer of this hospital, &c. vouchers of their relations or friends being willing to defray the expence of interment, which expence shall be estimated at the rate of twenty shillings.

III. That no dead body shall be delivered from any hospital, &c. for anatomical purposes, except upon the requisition of a Member of the Royal Colleges of Physicians and Surgeons of London, Edinburgh, and Dublin, or of the Faculty of Physicians and Surgeons of Glasgow, and upon the payment of twenty shillings into the hands of the treasurer of the hospital, &c. or other officer appointed to receive the same.

IV. That no dead body shall be conveyed from an hospital, &c. to a school of anatomy, except in a covered bier.

V. That after the expiration of twenty-eight days, an officer appointed for this purpose, in each of the four towns above mentioned, shall cause the remains of the dead to be placed in a coffin, removed from the school of anatomy where the dead body may have been examined, and decently interred.

VI. That the expences attending the execution of these regulations be defrayed out of the fees paid by teachers of anatomy and students, on the receiving of dead bodies from the hospitals, &c.

However sanguine we may be in our hopes that such a plan will, at length, come to receive the sanction of the legislature, and the approbation of all reflecting men in the nation, we are fully aware of the prejudices which are to be overcome upon this subject, and of the folly of thinking that their roots could ever be wrenched with sudden violence from the minds of the people. The baneful horror which the vulgar have for human dissections must be gradually calmed and slowly overcome. And one of the first steps by which this is likely to be accomplished, will be the abolition of that clause of our criminal code, by which the examination of the dead body is converted into a punishment

for murder, and the anatomist degraded below the common executioner. Let the anatomist assert the dignity of his art, and reject with disdain an office so unworthy of him, and ultimately so prejudicial to the interests of his profession.

ART. V. *Monographie des Dégénérations scirrheuses de l'Estomac. Par Frédéric Chardel, D.M. &c.* A Paris, 1808. pp. 213.

WE return a little on the steps of time, in order to bring before our readers this excellent little volume. Without, however, assuming the least merit to ourselves, we know that we are conferring an obligation in commencing or renewing their acquaintance with M. Chardel. We wonder, indeed, that this little work has never been translated into the English language. It, at least, merited this attention and consideration, both from the number and the value of the facts it contains. The unassuming and unencumbered form in which these facts are detailed, is also no small recommendation, especially in the work of a French writer. It is our intention, however, at present, to lay before our readers such a complete view of the contents of M. Chardel's work, as shall effectually deprive it of any chance of the honour of translation in future. Nor does this observation apply to M. Chardel's work alone; for we take this opportunity of acquainting our readers, that it is a part of our design to insert in this Journal such copious analyses of the works of foreign writers, as shall, henceforth, almost do away with the office of translation in regard to medical works.

M. Chardel dedicates his Essay to M. Corvisart, representing it as containing a series of facts collected by the author, under the immediate observation of the latter distinguished physician; a circumstance which certainly adds weight to its authority, notwithstanding the internal evidence it displays of a judicious and cautious investigation.

The arrangement of the work is extremely defective. In the subsequent analysis, we shall, therefore, pursue an order different to that adopted by the author. We shall first allude to the relative prevalency of these and some other organic diseases in the different ages and sexes, in reference to the observations at pp. 3—13. We shall then give the general symptoms of organic disease of the stomach, in its three periods, pp. 137—143. We shall, in the third place, state the distinctive symptoms of disease of the cardia, and of the pylorus, pp. 153, 17—79. We

shall, in the fourth place, allude to those cases of organic disease of the stomach in which the usual symptom of vomiting is absent, pp. 143—147. And, in the fifth place, we shall speak of those morbid affections, which, although of a different nature, resemble, and are liable to be mistaken for organic diseases of the stomach, and point out their diagnosis, pp. 159—179, 183—195, 199—207, 185. The causes of organic disease of the stomach will occupy the sixth place, pp. 81—102, 123—126. The seats and nature of these diseases, the seventh, pp. 10, 106, 110—119, 122, 130. And the treatment, the last, p. 210.

M. Chardel's work commences with some observations on the comparative prevalency of different organic diseases in the different ages and sexes. But the conclusions he has laid down, appear to us to be vague and hasty; to have been taken from too limited a number of patients; and, especially, to have been drawn from a set of patients ill calculated to afford a just view of this subject—we mean, the patients of an hospital. A paper, by Sir Gilbert Blane, in the Medico-Chirurgical Transactions, is well calculated to shew the interest of the point in question; and it has the advantage of presenting the comparative results of hospital and private practice, on a large scale, and for a considerable period.

M. Chardel's inferences are, that phthisis pulmonalis occurs incomparably more frequently in the female than in the male sex. Of thirty patients who died of this disease, in the Hôpital Cochin, in 1807, almost all were females. Our readers cannot be unaware, that this disease is, however, a very frequent occurrence in the male subject; and we even doubt whether he enjoys any very considerable proportionate immunity from it. Organic diseases of the stomach, according to M. Chardel's observations, attack half as many more males as females. From a statement made by M. Corvisart, it would appear, that organic diseases of the heart occur four times more frequently in the male than in the female sex. This point is, however, in our opinion, also overstated. After phthisis pulmonalis, organic diseases of the heart seem to be the most frequent; then follow diseases of the stomach and of the liver; or, as we should have stated it, diseases of the liver and of the stomach. In the table given by M. Chardel, pp. 89, we observe the titles laryngous phthisis, mesenteric phthisis, and tuberculous disease of the mesocolon. We have observed each of these forms of phthisis, if this term be admissible as a general appellation, and they have been treated of by several English medical writers,*

* See Mr. Charles Bell's Report. Hall on the Mimoses, p. 36. Baron on Tuberculous Accretions of Serous Membranes, &c.

although they do not occur so often as they ought, in the lists of Willan or Bateman.

M. Chardel divides organic disease of the stomach into *three* stages—the incipient, the confirmed, and the ulcerated. The course of the disease, and of its several stages, is indeterminate; the first stage is insidious and slow; the latter stages are more rapid, and are alone attended with febrile symptoms—the consequence of ulceration or of inflammation.

The *first stage* of organic disease of the stomach is attended by general langour and debility, heart-burn, flatulency, pain and uneasiness in the epigastric and hypochondriac regions extending to the back. The pain in the epigastric is more or less permanent; increased on pressure, especially after eating; and from taking food, the quantity of which is, in consequence, gradually diminished by the patient. Digestion is painful, accompanied by a sense of weight, and often by vomiting, which is succeeded by a respite from the previous sufferings. On this account the patient frequently brings about the relief which vomiting affords, by tickling the fauces. The bowels are usually constipated; an opposite state, however, prevails in some cases in which the disease is more than usually rapid in its progress. The alvine evacuation also generally affords a fleeting relief. The appetite commonly remains little impaired, but it is conjoined with the fear of taking food. The tongue is generally clean, and the taste natural; a contrary state the author considers and denominates an epiphenomenon.

Such is M. Chardel's account of the first stage of organic disease of the stomach. We would fix the attention of our younger readers, on the general permanency, and little variableness of the symptoms, and particularly on the effect which these diseases have of inducing, from the beginning, an insidious and progressive loss of flesh. This symptom alone should excite alarm. We have observed it in cases in which food has been both taken and retained, even in ample quantity.

The *second stage* is denoted by a decided, and sometimes even by a high degree of emaciation. The patient rejects the food he has taken, either by a painful vomiting, or by a different and less painful action of the æsophagus or stomach—sometimes together with much mucous fluid. In some instances, the food accumulates during several days, inducing a tumor, and even a sort of fluctuation perceptible through the abdominal parietes; vomiting is, however, at length excited, or the matters are gradually dispersed along the intestinal canal. The patient is usually obliged to diminish the quantity and bulk of his food, until a little milk or broth can alone be taken. There is in this

stage, frequently, a perceptible tumor in the epigastric region, painful, but not very tender under pressure; there is nearly continued pain. The bowels become constipated, and the alvine evacuation becomes indurated, less frequent, and sometimes resembling the meconium; occasionally diarrhœa alternates with constipation. The appetite and tongue are still frequently little affected.

In the *third stage*, the emaciation is extreme; the pain in the epigastric region still more acute and constant, and scarcely susceptible of alleviation by opium. The substances raised by vomiting, and the alvine evacuations may become mixed, offensive, dark-coloured, and purulent; or the stools may be alone affected, in cases in which the pylorus is the part diseased. The breath becomes offensive, the tongue may remain natural. Before death the vomitings may cease, whilst the bowels are affected with diarrhœa.

Having thus detailed the symptoms of diseases of the stomach in general, we proceed to particularize those of the cardia, and the pylorus.

In diseases of the *cardia*, there is a difficulty in deglutition proportionate to the degree of contraction. Where this contraction is very great, substances are rejected without having reached the stomach, by a particular action different from vomiting, and often accompanied or followed by much frothy or viscid mucus, and attended with pain or uneasiness at the part affected. There is also the absence of tumor in the epigastric region, where the disease is *confined* to this part.

We have been able to observe the *locality* of contraction in any part of the æsophagus, on watching the patient's attempt to swallow. By carefully observing the patient affected with disease of the cardia, during an attempt to eat or drink, much may be learnt respecting the seat and degree of the morbid affection.

Disease of the *pylorus* is distinguished by pain after eating, by vomiting, and by a perceptible tumor, whilst the difficulty in deglutition, and the peculiar rejection of unswallowed food, or of much mucus, just described, are absent. The tumor itself is felt in different situations, principally in the epigastric, but sometimes in the umbilical, or even the hypogastric region.*

The author appears to be deeply impressed with the difficulty of the diagnosis of organic diseases of the stomach, and has taken great pains to point out instances of these affections which have been unaccompanied by the usual symptoms; and

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* See Page 154.

those other affections which present the symptoms of disease of this organ, whilst the case has in reality been very different.

M. Chardel details some cases,† in which vomiting, one of the principal symptoms of diseases of the stomach, was absent. One case was mistaken for a disease of the liver, from the state of the complexion, and the seat and nature of the pain, and other symptoms; another, from the presence of a pulsating tumor in the epigastric, and extending into the left hypochondriac region, was regarded as aneurism of the cæliac artery or aorta; in a third case, the vomitings existed in the beginning, but ceased altogether during the course of the disease.

The morbid affections resembling organic diseases of the stomach, noticed by M. Chardel, are, first, spasmodic vomitings, several cases of which are detailed. The symptoms are very alarming, combining pain of the stomach, nausea, vomiting, and loss of flesh and strength; the matters rejected are sometimes black or dark coloured; the patients appear to have recovered under the use of gentle tonic purgatives, ipecacuanha, and glysters.

In the next place are noticed cases of vomiting from other causes. An affection of the uterus, or of the urinary passages, may induce frequent vomiting; the repulsion of a cutaneous eruption is also enumerated as a cause of this symptom.

In the last place, the author enumerates cases of hernia of the stomach, and of chronic inflammation of this organ, as occasionally inducing the symptoms of organic disease.

Youth, and the absence of epigastric tumor, are presumptions against the existence of organic diseases of the stomach. But it is to be remembered, that in some cases of this affection, as in diseases of the cardia, there is frequently no tumor; and that there are other tumors which might mislead the observer, and induce an idea of stomachal disease. The author enumerates, 1. Enlargement of the liver; 2. Abscess in the anterior cavity of the epiploon; 3. Enlargement of the pancreas; 4. Tuberculous disease of the mesentery.

On the head of *causes* of organic diseases of the stomach, little has hitherto been ascertained. M. Chardel divides them into mechanical, chemical, animal, and a particular state of the lymphatic system.

Mechanical causes do not appear to have much influence. Those persons who are occupied in a manner which implies

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† Page 143.

much presence over the epigastric region, do not, on that account, become more liable to diseases of the stomach. These diseases occur in persons of every profession, apparently indiscriminately.

Little more can be said of chemical agents. Persons addicted to spirits do not become the subjects of diseases of the stomach more than others. M. Chardel gives a case from Morgagni, in which mercurial remedies were supposed to have induced such a disease. But it must be acknowledged, that the subject is still veiled in great obscurity.

With regard to animal causes, we confess we do not fully comprehend the meaning of this part of M. Chardel's work, pp. 89—101. It consists, however, of observations on the metastasis of different kinds of virus. We must refer our readers, for once, to the work itself, as we do not see the connection of these observations with our present subject.

As little can be said of the author's remarks on the lymphatic system, as connected with organic disease of the stomach. We learn only, that four out of a hundred bodies dissected at the Ecole de Médecine, display organic disease of the viscus.

In a subsequent and separate part of the work,* the author remarks the occurrence of organic disease after hæmatemesis.

M. Chardel observes† that the parietes of the stomach, in several cases of disease of the pylorus, extending but diminishing towards the opposite part of the stomach, presented the following appearances:—the mucous membrane became thick and attached to the muscular; the cellular membrane became diseased, and in swelling, separated the muscular fibres, and contracted adhesions with the serous membrane, which, however, retained its polish. The disease grew thicker, principally by the tumefaction of the cellular membrane, as it approached the pylorus. The muscular fibres remained distinct, but pale. The mucous membrane became ulcerated.

The author states‡ that organic disease of the stomach presents itself under three forms:—first, a tuberculous state of the glands of the epiploon, situated next the stomach, which eventually becomes confounded with a portion of the coats of this organ; secondly, the peritoneum retains its peculiar polish, whilst there is the appearance of the effusion of coagulable lymph between this and the mucous membrane; thirdly, soft or hard growths, 'végétations,' from the mucous membrane.

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* Page 123. † Page 10. ‡ Page 106.

All these forms of organic disease may exist together in the same individual.

With disease of the stomach there is frequently tuberculous disease of other viscera of the abdomen—a circumstance which would appear to denote an analogy and connection between these affections, and to intimate that the nature of the disease of the stomach is different from true scirrhus or cancer. There is not the acute pain of cancer, except where the mucous membrane is most affected. M. Chardel asks,* "Do the fungous growths afford the offensive and dark-coloured matter vomited, by allowing blood to transude, which becomes changed during its stay in the cavity of the stomach?"

Ulcers of the stomach are not always the consequence of scirrhus; they sometimes constitute the primary affection; sometimes they may be the effect of hæmatemesis, and in other instances of inflammation.

The author appears to refer the nature and seat of organic diseases of the stomach very much to the action and distribution of the absorbent system, connecting them in this view, with the simultaneous tuberculous affections of other organs, as we have already observed. This question is still open to investigation. The pathology of tumors has lately excited much attention from several of our compatriots; we trust, therefore, that something will ere long be added to our knowledge of this important subject.

We now come to the *treatment*, the end of all our medical enquiries. Alas! this only occupies three little pages! Antiphlogistic measures, when there are symptoms of inflammation, vesications, opium, enemata, cataplasms, bland and diluent food and drink constitute the principal and almost the only measures which medicine can adopt for the relief of the patient. M. Chardel does not, at least, conduct us to any happier results; and we do not feel tempted to occupy our pages with any further detail of remedies, of which many have been proposed, but none, hitherto, found at all successful.

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* Page 117.

ART. VI. *Mémoires sur la Nature et le traitement de plusieurs Maladies. Par Antoine Portal, Premier Médecin du Roi, Professeur de Médecine au Collège de France, d'Anatomie au Jardin du Roi, Chevalier de l'Ordre de Saint-Michel, et de la Légion d'Honneur, &c. &c. Tome Quatrième, contenant des Observations et des Remarques sur plusieurs Maladies du Cœur, &c. &c.* 8vo. pp. 355. à Paris, Bertrand, 1819.

IT is with pleasure we submit to the notice of our readers an additional volume of the interesting work of the venerable Portal. It consists of a collection of various Memoirs, some of which were read to the *Institute*, or to other learned bodies in the French capital; some are extracted from the lectures, which at the *Collège Royal* have gained for their author a reputation so well merited; and others seem to have been written with an immediate view to this publication. The major part of the volume is occupied with investigations on the diseases of the heart. Without further preamble, we shall proceed to present, so far as our limits permit, a succinct analysis.

The first very spirited little Memoir is upon INFLAMMATION OF THE PERICARDIUM. This introduces the subject of the differences in the characters and affections of membranes. It was the successful labours of one whose brilliant but short career our author saw begin and terminate, that attracted for these parts of the animal machine that attention they so well deserve. Elevated by the novelty of a newly discovered department of our science, the enthusiastic mind of Bichat was probably carried away too far; and the views of subsequent pathologists, we allude principally to Pinel, have not escaped an undue influence from the physiologist's fascinating Researches. Here then we see the benefit of the unimpassioned observation of one already growing gray in the healing art. Not acknowledging the correctness of the new division of inflammations, our author has never been able to derive benefit from it in practice; nay, he is persuaded, that harm results from the views respecting it, which are now delivered in the schools.

Our author extends his remarks to all the serous membranes. He contends, that in acute inflammation of the membranes of the brain, when the symptoms become serious, and the event doubtful, the proper substance of the brain participates in the disease, and contributes its share to the symptoms and danger. He conceives the same to be true with regard to the corresponding membranes of the thorax. As early as 1789, he read

a Memoir to *l'Academie Royale des Sciences*, in which he endeavoured to establish this point. Again, in 1817, before the same *Academie* he undertook to establish the principle with regard to the various folds of the peritoneum; and he here finishes the investigation by extending the same views to the pericardium and the organ it envelopes.

By a separate article, at the close of this volume, we learn that the author attaches so much importance to the subject, that he thought it worth while, in 1818, to call the attention of the *Institute* to the point, as it regarded the peritoneum. As the inquiry is very much the same whether it refer to the pericardium or to the peritoneum, we shall consider the two papers together.

The question, so far as we remember, has never been agitated in this country. It is one, however, of very considerable scientific interest, on which our ideas ought to be correct. It was an opinion of the father of physic, which continued to prevail for many succeeding ages, that diseases were different, as they occurred in the membranes themselves, or in the viscera which these surround and envelope. It will not, however, for a moment be disputed, that this opinion should rest, not merely upon observation of symptoms, but also on the appearances discovered on dissection. So soon as the anatomy of morbid parts became an object of pursuit, this question forced itself upon the attention of those who were prosecuting the study; and they, according to our author, were led to a conclusion different from that of the great founders of our art. Coïterus, the master of Morgagni, was among the first that was led to adopt these views. Platorus, Zuingenus, and Valsalva, after much research, came to the same conclusion; and Morgagni, we are told, though he began his investigations strongly biassed against the new doctrine, finished by being convinced of its truth.

Coïterus seems to have been first led to the point as it concerned the enchephalon. He convinced himself that phrenitis was caused by an inflammation of the brain, and not of its membranes. Morgagni and many others have since confirmed this view. In 1593, an affection of the chest appeared epidemically in Rome. Much opportunity of observation was thus afforded, and Coïterus again, with many others, arrived at the same conclusion.

It can hardly be objected, that this result is too much founded on the lessons learnt by dissection. Our author, however, resolved that, on this account, there should not remain the shadow of a doubt; and early in life devoted himself alike assiduously to clinical observations, and to examinations after

death. His first Memoir, as we have already hinted, that of 1789, was an elaborate one on the thoracic viscera. In the opinion of M. Tissot, it threw a new light upon the subject; which would presently be seen and embraced by the profession at large. Our author thus circumstanced, has come to the conclusion that this is the general as well as the correct view of the subject, and objects to the revival of an absolute doctrine by the adoption and extension of the arrangement of M. Pinel. He, probably, little expects how small a share of attention these opinions have attracted in this country, and how invariably, we may say, they have been overlooked.

It is to our nosologists and our system-makers we would principally refer the consideration of this point; for there can be little doubt that very shortly after leaving the schools, the practitioner failing to discover many of the nice artificial distinctions he was taught to expect, and seeing how very few cases he can regard as simple exhibitions of any one disease that he was wont to hear described to him, quickly feels the truth of this aphorism of our great philosopher, subtilitas naturæ, subtilitatem sensus et intellectus, multis partibus superat; and can offer but a feeble resistance to that blighting shade which falls upon the acquirements of his earlier years—the happiest and most profitable studies of his life. Far be it from us to decry the study of systems and of nosology. They cannot be neglected without the greatest detriment. We only feel anxious that they should be as correct as possible; that they should not be at issue with nature on a point at once so important and so extensive.

The mode of procedure adopted by our author, is sufficiently simple and unexceptionable. He begins by stating, 1st. That the signs of inflammation are rarely found on the peritoneum alone, but when so insulated, are not attended by those symptoms which are noted as characteristic of peritonitis. He, in proof of this truth, recalls to our remembrance the state of the peritoneum, when covered with granular elevations. As we are not more than sufficiently familiar with these appearances, we shall transcribe the statements of our author:—"These are sometimes of the size of a millet seed, sometimes like small hydatids, full of serum, or of a yellowish fluid. Occasionally they appear fleshy, or still harder, like warts. I have sometimes seen them as if elevated." In many instances of this kind, the peritoneum retains its natural colour; in others again it assumes the inflammatory hue. Daily observation exhibits this; and some of our readers may remember the beautiful wax representations of small scarlet tubercles upon such a ground, that are

contained in the third *Salle* of the Museum of *l'Ecole de Médecine* at Paris. Now, in these cases, no previous symptoms declare the inflammatory action. Our author gives some cases in which he had been in attendance; the patients had died of some other disease, and without any abdominal symptoms. On dissection the peritoneum was discovered 'very red.'

In the second place, inflammation of the peritoneum sometimes occurs with a corresponding affection of the parts that cover it externally, and still none of the accredited symptoms of peritonitis are present. These cases are not of very common occurrence. The assiduity of our author, however, has enabled him to collect several. The particulars of these are given, and we find no abdominal symptoms were present.

And, thirdly, when there is inflammation of the peritoneum, in common with an affection of the contained viscera, he states, that the symptoms of peritonitis are nothing; that they are merged in the affection of the more important viscus. This he proves by a reference to authorities (our earlier practical anatomists had no name for the more insulated affection); and by a specification of the diseases in which it is supposed to occur. In these, on dissection, the extent of the peritoneal inflammation is defined by that of the diseased organs. On these grounds, the author states, that there is no peritonitis distinct from inflammation of the other viscera of the abdomen.

The mode of argument in the first Memoir is somewhat similar. The symptoms of inflammation of the pericardium as they are generally received, are introduced;—are compared with the symptoms of similar affections of the heart and neighbouring viscera, and are shewn to be the same;—that when they are more than trifling complaints, various structures are affected;—that no satisfactory diagnosis can be made out. Death, it is stated, is never produced by inflammation of the pericardium *simply*. So long as the affection is uncombined with others, it only produces slight symptoms, which hardly excite the attention of the patient, far less of the physician. Inflammation of membranes, without participation of the contained viscera, is observed—like the phœnix born—once in 500 years.

In the work on "The Membranes," much is said on the sympathies of *sensibilité* and *tonicité*. Those which arise from nervous connection are, however, still more worthy of attention. In the Memoir before us, we have some very curious and useful exhibitions of its occurrence, which shew the necessity of extensive knowledge as well as accurate discrimination. Madame Saillant was suddenly seized with violent pain of the larynx and pharynx. She breathed, spoke, and swallowed with difficulty.

Her voice was sometimes hoarse, and sometimes very shrill. Deglutition was so difficult, that liquids returned by the nostrils. High inflammatory fever accompanied these symptoms, to which were added frequent attacks of syncope. The disease was regarded as laryngites. She was thrice bled, and the antiphlogistic regimen was adopted in all its extent. The symptoms, however, continued to increase, respiration became more difficult, the syncope more alarming, and she died the seventh day of the disease. The larynx, trachea, and pharynx were found in a perfectly healthy state. The disease was situated in the pericardium and heart. The former was much inflamed, and by coagulable lymph adhered to the latter. The heart was very red in colour, and was easily torn. The abdominal viscera were healthy.

A child, æt. 7, died with all the marked symptoms of croup, with the addition of syncope. On dissection no disease was found in the larynx. The pericardium and heart were of a violet red colour, and the latter very soft. Our author explains these symptoms, not from the connection of membranes, but the communication of vessels. The distribution of the recurrents will occur to every one.

The second, and several of the succeeding Memoirs are upon Aneurism of the Heart. The subject is discussed in two papers that were read to the *Institute*, in different years, and in various extracts from the Professor's lectures. This gives rise to a want of unity of plan, and to some repetition; which in the analysis we shall attempt to avoid.

The Essays bear the character more of critiques upon the prevailing opinions of the day than of systematic treatises on the subject. When any set of opinions or persons are *spoken at*, we regard it as our happy privilege to set in order the arena, to usher the combatants into the list, and to the utmost of our power to see fair play. In execution of this part of our duty, we must on the present occasion allude to the opinions which afford to our author the ground of comment. We shall attempt to delineate the truth as it is now supposed to exist, and assign to all their due.

Enlargement and dilatation of the heart are diseases so common and so formidable, that notwithstanding the many difficulties they had to encounter, we almost wonder that the ancient physicians were unacquainted with them. Nicolas Massa Vesalius, and Bollen, are, according to our author, the only writers who notice their occurrence previous to the discovery of the circulation in 1628. Since that time the subject has received a very liberal share of attention. It is only however,

within our own times, that it has been fully discussed. In the Memoirs, we have now the honour to introduce to the notice of our readers, some important additions are made to our stock of information. It is within these few years that the causes have been detected, and the symptoms recognized with tolerable accuracy. All the labourers in this field with whom we are acquainted, have proceeded in their investigations in the way of analysis; andwe know of no author in whose writings a lucid statement of our knowledge on this subject is now to be found. Would that we could in a few words supply the deficiency!

The present condition of our knowledge on these diseases is, we are persuaded, the true cause of that perplexing and vicious nomenclature which at present exists. The terms *aneurism*, *active* and *passive* dilatation, &c. &c. are not only inexpressive, but have a tendency to mislead. We reject then, the present terms, and will express ourselves without technicalities, in *common* language. When the truth is ascertained, with regard to the real state of parts, there will be no difficulty in procuring a just and expressive phrascology.

Our readers will remember how much medicine is indebted to M. Corvisart for the clear expositions he has afforded. He divided dilatations into *active* and *passive*, comprehending under the former title those in which the power and strength of the parietes were increased, and under the latter, those in which they were diminished. In the one the walls were thinner, in the other thicker than natural. He imagined the vice was in the heart, or in the circulation, or in both; that when the system was in a state of plethora, or the heart, from other causes, kept much in a state of congestion, it had a tendency to dilate in one or more of its cavities. He stated that the auricles were most apt to dilate; then the right ventricle, and last in the series, the left. With the dilatation of the auricles he almost invariably found a corresponding increased tenuity of the parietes. In the right ventricle too, the walls generally became thinner as its capacity increased; but in the left ventricle the contrary was true. He considered the cause to be pressure on the parietes from the fulness of the cavities, which in their dilatation became attenuated or thickened, not from superadded disease, but from the inherent and original diversity of structure. He conceived the symptoms would be found to correspond with this explanation:—That in active aneurism the powers of the heart would be found to be increased—to be violent; its concussion on the chest great, and the pulse proportionably strong.

We had the pleasure in a late number (see Vol. I. p. 97), to state to our readers the very important conclusions at which

M. Rostan had arrived after a very laborious investigation of the subject. He convinced himself that dilatations, with increased thickness, were not to be ascribed simply to the effect of internal impulse, modified by the original character of the cavity, but that invariably some extrinsic causes could be found; that the current of the circulation was opposed, either at the valves, or at some remoter distance; that the heart endeavoured to overcome this resistance; that in this effort its parietes were often increased in thickness, and its powers in strength. Patient examination declared the obstruction sometimes to exist at a distance from the centre of circulation, which had not previously been contemplated, deep in the substance of the lungs, or far in the course of the aorta. He conceived the disease to occur more frequently in the right ventricle than M. Corvisart had done. Claiming then the merit of asserting for this cause the consequence it bore, one which seemed so satisfactorily to account for the appearances, he upon the whole agreed with his fellow-labourer in the same field, that where there was increased thickness there was increased power. He very clearly, however, demonstrated how all this might exist without its manifesting itself by those symptoms of increased strength and power on which M. Corvisart had dwelt. The heart was making its effort to overcome some resistance, and the full effect of its impulse could be felt only to the point of obstruction. Hence you could no longer depend on mere strength of pulse as a distinguished sign of dilatation with increased thickness of parieties.

Imagining that he had thus ascertained more satisfactorily than had previously been done, the key-stone on which much learned lore had been built, the cause of that class of disease generally denominated active dilatation, M. Rostan's investigations disclosed another truth. The cause of obstruction sometimes acted so long, and the thickening increased to such an extent, that it encroached upon the capacity of the cavity. Seeing how this could be readily explained, that it was but a further effect of the same cause, he very naturally allowed it to remain in the class to which it was most allied. In several cases he found the cavity so small that it would hardly contain a walnut.

"General observations," says Locke, "when drawn from particulars, are the jewels of knowledge, comprehending great store in little room. They are, therefore, to be made with the greater care and caution." This remark is naturally suggested when reviewing the conclusions both of Corvisart and Rostan. A too ready tendency to draw general conclusions, appears

inseparable from the operations of the human intellect. In the second part of the valuable work of M. Laennec, to which we called the attention of our readers in our last number, there is much valuable information on the diseases of the heart. From this source we learn that the disease which M. Rostan attributes uniformly to some obstruction in the course of the circulation, may sometimes arise independently of this or any other very apparent cause. M. Laennec regards it occasionally as an idiopathic affection of the heart, but when so, not of frequent occurrence. It seldom affects the auricles, and more frequently the left than the right ventricle. The *septum* and *columnæ carneæ* do not escape. The whole muscular structure becomes denser, and of a deeper red colour than natural. The cavities are commonly diminished in proportion to the augmentation of the muscular fibre. The pulse is generally strong and full, and a violent percussion is felt in the region of the heart both by the patient and physician.

Thus have we sketched, with a hurried hand, the part of our subject that alludes to dilatation with increased thickness, as displayed by its recent delineators, the state which forms the active aneurism of Corvisart—the *hypentrophia*, with its various modifications, of M. Laennec.

M. Portal condescends to criticise the last observation we noted as presented by M. Rostan—that the parietes sometimes become so thick as to diminish the cavity. After telling us that it is contradictory to introduce this variety of disease as a species of dilatation, he dismisses the subject without farther consideration (see pp. 64 and 84); and in several papers on the disease, one exclusively on "Dilatation with increased thickness of Parietes," says not one word on this most frequent variety of the disease, which the labours of his countrymen had done so much to elucidate. Of this we cannot approve; and we are sorry to say that it can hardly result from accident, or be the effect of sage design.

Nor can we give our author more credit for the next specimen of criticism which we have to notice. Corvisart, we have seen, described two species of dilatation, one in which the parieties were diminished, another in which they were increased in thickness. We have also alluded to the symptoms by which he imagined these states to be characterized; that in the former the energy of the heart was diminished, and therefore the pulse weakened; in the latter increased, and therefore stronger than natural. Our author objects to this view of the subject; he thinks that it is established on no sufficient grounds, and ought not to be adopted. (p. 85.) Our readers will be astonished to learn the mode by

which he endeavours to establish this point. He does not tell us that he had discovered that Corvisart had been hasty in his observations—that he had stated the subject with a partial bias; but he scrutinizes the symptoms which had been mentioned as indicative of the disease; and after detecting something inaccurate here, would have us, after his example, shut our eyes, and see no beauty simplicity nor truth in the whole arrangement.

We are sorry to say that nearly the whole of the second Memoir is occupied in this labour, which in our estimation is worse than useless. Certain cases are adduced at full length to prove that sometimes the pulse is strong and full, while the parietes are discovered by subsequent examination, to be thinner than natural; and allusion is made to others, in which, though the pulse was weak, the parietes were thicker than usual. Now we could willingly have credited all this on the testimony of our author without the cases. We see how the fact of obstruction, as dwelt upon by Rostan, would satisfactorily account for all; and we then ask, What does the fact prove? Merely that M. Corvisart was wrong in his symptomatology. Not surely, that there are no cases of dilatation with increased thickness of parietes, in which there is a proportionate increase of power, as our author implies, and as his conduct would lead us to suppose; and that the division is not founded upon nature, as he in as many words expresses.

Previous to the time of Corvisart, dilatation with increased thickness had been known to exist; but it was a very different variety of disease from that which we have just been considering. It was not accompanied with increased force, with additional muscular energy, and superabounding vigour. The structure was loosened, softened, broken down. This was the only variety which previous to his time was recognized, and it was considered as a disease of weakness, of morbid enlargement, similar to what is observed in a vitiated and diseased gland.

Our author, in his younger days, had done much with his honoured masters and coadjutors, in elucidating this state. This was the view and theory of the disease which they adopted and favoured; and though in this part of his labours we may perhaps detect something of the octoginarian, yet we cannot but excuse, if we do not commend, prejudices founded on the labours of such men, and consecrated by the names of Lieutaud and Senac.

The first Memoir on which we are now commenting, is upon the other variety of dilatation with increased thickness; and we have much pleasure in saying, that in the author it has found a

very able expositor—one who, in a small compass, has done it every justice. He specifies five causes of increased thickness: 1. A steatomatous affection; 2. An accumulation of fat on the exterior, or in the parietes of the organ; 3. Adventitious membranes in the cavities, or on the surface; 4. A varicose state *(engorgement)* of the coronary vessels; and, 5. Serous and purulent infiltrations of the parietes, sometimes with hydatids. These may occur without any dilatation of the cavities. The observation of our author, however, shews them to be more frequently combined.

The steatomatous state first mentioned, little noticed by authors, is not uncommon. Medical men are more familiar with it in other textures than in the heart. In examining this organ when thus affected, the muscular fasciculæ and the individual fibres are much enlarged. A gelatinous substance surrounds the fibres, and interstices are left between them, filled with semi-fluids, differing in colour and consistence. This increases the thickness and makes it soft. Sometimes the disease is general, sometimes confined to a small point. The part of the parietes not affected is occasionally thinner than usual. Our author imagines that this state of the heart will generally be found in cases of rupture; and it is the diseased mass, not the attenuated portion that is found to give way. It is, however, scarcely rupture, because this morbid state has generally proceeded to such an extent that the most gentle impulse is sufficient to overcome the resistance. As it is in the left ventricle that this kind of thickening is most apt to occur, so it is here that rupture, not an uncommon disease, is most likely to happen. In those cases in which a communication is established between the two ventricles, whether it be immediately fatal, or give rise to a long train of distressing symptoms, still the same disease will be found its cause.

This affection occurs most frequently in those of a strumous habit, in whom the lymphatic glands are enlarged, or who have been debilitated by some other disease. Not unfrequently it presents itself in those who inhale some very fine powder, as perfumers, millers, &c. &c. A proneness to obesity is a frequent attendant; and many cases have shewn it to possess an hereditary tendency.

It is by a reference to this disease that our author would explain the occurrence of those enormous hearts that are sometimes witnessed; those in which the apex is found larger than the base; which have been found to weigh even 15 lbs; to fill a large proportion of the chest; to deserve the appellation of *Cor bubulum*. We should be sorry to follow the example given,

and leave the impression that other states of the organ did not produce the same appearance.

In proceeding to the second cause of increased thickness of parietes, the accumulation of fat, our author observes, that it is not to be confounded with the affection just described. The two diseases are different. In general the heart is remarkably free from fat. Sometimes, however, it becomes greatly loaded, and not merely on the surface, but also in the cellular tissue, surrounding the fibres. This state is found not only in those who are inclined to obesity, but sometimes in those who are very thin; in those who are dying apparently from atrophy. It very much weakens the power of the viscus. M. Portal mentions that he has met with a case similar to one mentioned by Corvisart, in which the heart was nearly entirely converted into *Adipocire*. The patient was an old woman.

The third cause specified is adventitious membranes. These may occur on the surface or in the cavities. In the former case it is a deposition from inflammatory action, and may exist in various degrees of extent and thickness. The pericardium is in this way sometimes entirely united to the heart; and our author would thus account for the alleged cases of the want of the enveloping membrane. He has made this attempt more at large in some other of his works; but we cannot admit successfully. It is impossible, we think, to read the description given by Baillie, and others who might be mentioned, without crediting the reality of the occurrence. We then, with Blumenbach, are believers in the phenomenon. Do we not daily see things as strange? Sometimes there is no heart, why disbelieve that sometimes there may be no pericardium?

The adventitious membrane found in the cavities is of a different nature, and of more frequent occurrence; and it is strange if it be true, as our author states, that it is not mentioned by authors. The affection is one which occurs as a consequence of the dilatation of the cavities of the heart, whether more local or general. As in aneurism occurring in an artery, when a cavity is formed out of the current of the circulation, the blood lodges and separates into its component parts, the red globules are removed, and the fibrin is deposited in successive layers; so it sometimes happens in the heart. We have frequently seen these of very considerable tenacity, and evidently old depositions. They are not to be considered as the effort of nature to supply the strength of the weakened parietes, as has frequently been supposed, but merely the consequence of the mechanical laws to which the blood is subjected.

These are the only living membranes to which our author

alludes. We have sometimes witnessed, within the cavities, others which appear to bear a strict resemblance to those mentioned as occurring on the surface of the heart. Not successive layers of dead fibrin, but a living coating over a greater or less extent of the cavity, inseparably connected with its living membrane. They were probably the result of inflammation.

We here introduce a cause of disease, so far as we know, hitherto unobserved, but, if correct, truly interesting. It is connected in the Memoirs before us, with the steatomatous affection of the organ under consideration. Vesalius had a patient who had long been troubled with symptoms of diseased heart. On dissection, he found fleshy excresences in the ventricles. Our author remarks, that he has frequently seen remarkable instances of this sort. They resemble the excresences that are familiarly known to invade the internal surface of the uterus, bladder, lining membrane of the bronchiæ and alimentary canal. The author shewed, in a paper which was inserted in the Transactions of the *Institute* for 1808, that these were sometimes detached from their connections in the latter instances specified, and thrown loose into the cavity or passage in which they had germinated. He thinks it probable the same process sometimes takes place in the heart, and thus produces the most fatal accidents. He furnishes us with no case in which death thus occurred. M. Riolan, however, is persuaded of the reality of this cause of disease and death. Having pointed out the probability of the occurrence, much observation is necessary, and we hope will not be spared in bringing the question to a satisfactory termination.

The fourth cause mentioned is what we have called a varicose state of the coronary vessels. It involves the highest degree of congestion. The vessels are not only full of blood themselves, but it exudes into the parietes, and from the surfaces of the head. This, according to our author, is a very common state of the diseased organ. It arises from some obstruction in its circulation. He points out three such obstacles ;—the compression of the veins on the inner surface, from the cavities being overloaded with blood; a diseased state of the valves of the coronary veins, and such a congestion of blood in the right auricle as to prevent the blood from the substance of the heart gaining a ready admittance. The first of these causes seems sufficiently fanciful. It is, however, a favourite physiological doctrine of our author, as, it may be remembered, he in this very way ingeniously accounts for the enlargement of the uterus at the period of utero-gestation.

The last cause specified seems connected with the one we

have just left, infiltrations of the parietes, sometimes with hydatids. These infiltrations our author has seen, when there was no general dropsy present. The word hydatid is used in an extensive sense, comprehending various watery encysted tumors. They are generally from the size of a pin-head to that of a pea, filled with a yellowish substance, more or less compact. They are sometimes granular or fatty. They are found in the parietes as well as on the surfaces.

Such are the results of our author's observations, when, in dilatations of the heart, the parietes, instead of becoming thinner, have retained their natural state, or acquired a greater degree of thickness. This state of parts, attended with a scrofulous condition of the patient, constitutes, in his apprehension, the predisposing causes of dilatation; the more active and exciting are violent efforts, which hurry and disturb the circulation; whether violent struggles made by a person in health, or causes producing a flow of blood to the head in disease.

A circumstance which attaches a great additional interest to this variety of the disease, and makes it of all others the most important, is the power which art has over it. In many cases of diseases of the heart, additional knowledge only enables us more promptly and unequivocally to foresee the hapless destiny of our lost patient. It is important to know that this is one of the few exceptions to this statement. Our author, convinced that the vitiated state of the constitution had much to do in the production of the disease, that it had a strong tendency to produce relaxation of the texture of the heart, and diminution of its powers of resistance, judged that as by proper remedies the tendency was removed, and health restored in other textures, so it might be here: these steatomatous affections being cured in the mesentery, mammæ, and uterus, he hoped they might also yield in the heart.

This animated him with hope, and encouraged him to repeated and persevering efforts, and the result has been "that doubt has terminated in conviction," that a judicious treatment may be prescribed with success. "I have had under my care," says he, "patients labouring under violent palpitations of the heart, with an uncqual and intermitting pulse, an extreme difficulty of breathing, and frequent syncope, without any symptoms differing from those which arose from a dilatation of the heart,—cases of that description, that at first I thought there was nothing to hope; but observing in them fulness and obstruction of the glands of the neck, abdominal viscera, &c. I have prescribed anti-scrofulous remedies, with anodynes, and

small bleedings, if necessary, and have thus obtained an unexpected degrée of success.

Our author now adduces several cases in which the disease appeared to him unequivocal; was treated on these principles, and led to the result, "qu'on peut parvenir à guérir des dilatations du cœur bien prononcées provenans du vice stéatomateux."

He then refers to others, in which he treated this disease when complicated with other maladies. The same happy result followed, and a similar conclusion is drawn.

The remaining chapters on this subject are occupied with the symptoms, prognosis, treatment, &c. of the disease. These are excellent, and cannot be read without pleasure and profit. It is, however, impossible to analyse them. We have already stated the treatment generally. The concluding paragraph on the symptoms presents us with the following remark:—" We have said that the attacks of syncope are the most troublesome symptoms of dilatation of the heart. These are sometimes slight and occasional; but ere long they become very frequent, and are truly distressing. The pulse sometimes comes down to 50, 30, 20, 10 beats in the minute. Such cases I have sometimes seen, and the arteries were so soft and weak, that they appeared to contain nothing but air. The heat of the extremities was considerably diminished, so that they were very cold; finally, when it was least expected, life terminated " en s'éclipsant." But this is truly verifying the ancient fable of bringing a brick to market by way of specimen of a house. We finish our remarks on this part of our subject by recommending it to the attention of our readers, as a good specimen of the experience and acumen of the author.

The pathology of the heart is continued in the five preceding articles, on which we cannot now dwell long. One of these is on inflammation of the heart.

Carditis.—The fact that the existence of this disease has been doubted, is sufficient evidence that it is not very common. Our author is, however, right, we think, in ascribing this circumstance more to a want of discrimination than to any paucity of examples. He thinks there are several varieties. The first of these is the *acute.* In this there is pain in the organ, with increase of heat; the sensation of heat spreads to the surrounding regions. The pulse is quick, frequent, intermitting, and unequal; syncope is often present. The functions of respiration, at the same time, are but little affected. The pain is confined to the region of the heart. There is no cough nor expectoration. This variety sometimes proves fatal in a few hours, and the author seems to think that when the symptoms are urgent, it is necessarily fatal.

Another variety may be characterized as *latent*. Here the symptoms are little if at all conspicuous; and if syncope occurs, its nature is not understood. The spirit is, as it were, at once subdued and broken. The pulse is slow, soft, and feeble. There is neither pain in the heart nor palpitation, and scarcely any fever. The manner in which inflammation may proceed without any very marked symptoms, does not appear evident. Dissection, however, speaks a language not to be misunderstood, and exhibits the effect of violent inflammation of the heart. This variety is sometimes acute, and always dangerous. It occasionally runs its course so rapidly, that it is hardly observed till death is at the door. It is often idiopathic, but it is also frequently joined and confounded with other diseases, particularly those of the asthenic type. Sometimes, in cases of typhus, the patient dies, most unexpectedly, on the first or second day. This is still more frequently witnessed in the plague. Unfortunate individuals die so suddenly, that no assistance can be afforded them. The cause of death in these cases is often left altogether to conjecture. Our author thinks that suppuration, putrefaction, and gangrene of the heart, will generally be found. In this view he is supported by many observations made by M. Chicoyneau, first physician to Louis XV. who saw much of the famous plague of Marseilles.

This latent variety is, however, still more frequently to be classed with Chronic Carditis. This, we are, informed, is the most frequent variety, and really a common disease. Dissection every day exhibits it, as evinced by suppuration, more or less general, destruction of substance, intimate adherence to the pericardium, membranous and cartilaginous indurations in its substance, &c. &c. These cases are undoubtedly, as our author observes, often misunderstood at the bed-side of the patient, and only recognized on opening the chest.

On the treatment of this affection, we have not room to say any thing. The most active remedies can alone be of any avail.

Another of these Memoirs is on *Angina Pectoris*. This is principally a compilation, and gives a comprehensive and lucid view of the subject. The author, after the example of the learned Bréra, an Italian physician, prefers the term Sternocardia to the one generally in use. The description of symptoms is very happy. We can hardly say so much for his account of the causes. There is here a want of discrimination. We see too much of the prosecutor of morbid anatomy, and too little of the observer. He admits as causes almost all that the most wandering fancy has ever assigned. Some are in the

heart, and some far removed from it. Among those that are considered best established, we find rheumatism, scrofula, syphilis, plethora, diseases of the lungs, diaphragm, and abdominal viscera. Nay, we find that *nervousness* is no longer an "English malady," but that this too is among the causes of angina pectoris. The author has been too liberal in admitting causes. Nor is any attempt made to ascertain the specific and uniform one. It is regarded, like syncope, as a frequent symptom of all disordered states of the circulating system. We cannot regard this view as correct. And though we reject many of the causes alleged to produce the disease, we are not prepared to assign the limitation.

This view of the subject unhappily influences what is said of the treatment. We see much we consider inapplicable; little that can be regarded as efficient.

The three remaining Essays are upon *Cardialgia, Palpitations*, and *Faiblesses*. Though the mode of studying a subject here followed may have some advantage, yet we cannot but consider it as injudicious to write long and formal Essays upon complaints that are mere symptoms. We thus make as many diseases as there are painful sensations, and endless and wearisome repetition is the consequence. Real advantage is to be derived only when the cause of the occurrence is accurately traced, and generalization is employed to shew, that, in the various disorders in which the symptom appears, it is produced in the same way; or when the attention is principally given to the rarer instances of its appearance,—to those which are not insisted upon in the study of regular diseases. In the papers before us, the remarks are limited by neither of these views, and we have nothing of the modus operandi of the cause. No classification is admitted, but the most perplexing variety, a fine lady taking her usual morning fit, and her *Eau de Cologne*, and a person expiring from angina pectoris, are huddled together in the same sentence, handled with the same gravity, and exhibited as requiring the same treatment.

Even had we room, we could not excuse ourselves were we to give any very minute account of these Essays.

We need only remark, that under the title *Cardialgia*, our author discusses pain of the heart, and very properly objects to its being mistaken or confounded with Gastralgia.

The paper on *Palpitation* occupies nearly fifty pages. It takes a very extensive view of the subject, and cannot be read without profit. We, however, find it nearly impossible to offer any useful analysis. Our readers will remember it is an opinion entertained by Corvisart, that the mental anxieties and

horrors of the Revolution had much increased the frequency of diseases of the heart in France. The following case may be considered as illustrating this truth: A young Lady learnt that her husband had been murdered by a band of the Revolutionary butchers. She instantly was seized with palpitation, which was presently followed by syncope, and was thought to be mortal. This apprehension was erroneous. She recovered; but the palpitations continued many years, and she died at length of water in the chest.

The following curious case is placed in that class which our author thinks is produced by falls and blows. It occurred under his own eye. A mason having fallen from a great height, remained speechless. A surgeon was called, who discovered the pulse so small, low and wiry, that he could hardly perceive it. The heart was nevertheless beating with so much violence against the ribs, that it was distinctly heard. He was bled twice without benefit; and on dissection, the heart was found dilated and filled with clots of blood.

Under the term *Faiblesse* is comprehended a variety of states, bearing to each other very distant resemblance, and differing in the most essential and important points. In some of them there is real debility, with true syncope, and a languid circulation, which almost eludes observation; whilst in others there is plethora, with bloated countenance, full pulse and inflammation. One variety is described as the effect of the violent passions, especially of anger. In this the blood is sent with too much velocity and force into the heart, the brain, &c. &c., and venesection is required. No further proof is, we imagine, necessary to shew the danger of merely studying individual symptoms. We have here, we imagine, the two opposite states of the system and of the brain, classed under the same head.

The following paragraph is worthy of attention: "It ought to be known that we may have apparent death from syncope as well as from asphyxia, and that forgetting this we may mistake, and bury the living with the dead. I have seen a man who, after a violent cholic, remained for many hours in a state of syncope, without pulse, with the colour and coldness of death, and without any motion in his breast to mark the continuation of respiration. After some hours of apparent death, he passed a concrete bilious matter, and the syncope disappeared. I have seen another such syncope in the person of a barrister, who had been regaling himself with a copious dinner. The attack was at first regarded as comatose, although the patient was almost without pulse, very pale, nearly cold, and without uneasiness in respiration. Emetics and *lavements* were prescribed

without benefit. At length he was thought to be dead; but borborygmus was heard, a copious alvine evacuation followed, after which sense and health returned.

In quitting this subject, we feel that we should be guilty of almost a dereliction of duty, did we not assign to our industrious neighbours that meed of praise which they have so abundantly merited. In many departments of our science, we need not be afraid of a fair comparison, but in this field we must yield.

They have long with a peculiar felicity, elucidated these momentous diseases. We do not, at present, remember any name we could put in the same line with Lieutaud or Senac, with Portal, Corvisart, or Laennec. We freely and cordially avow that here we think they have a decided and bright superiority.

The volume concludes with several Memoirs of minor interest. The first of these is upon *vomiting*. The temporary importance it might once have claimed, is now passed away. It was written after M. Magendie had read several of his papers on the subject to the *Institute*. In these, as is well known, he attempted to establish that the stomach is passive in this distressing effort, and that all is accomplished by the action of the surrounding muscular parietes.

Nearly fifty years previous to the present date (in 1771), M. Portal, prosecuting this important inquiry, divided the doabminal muscles of several animals, and found that still they were capable of vomiting. The conclusion founded upon these experiments did not fail subsequently to receive corroboration from various clinical phenomena that had excited the attention of the Professor, and the paper before us is occupied in detailing these experiments and observations. As they have elsewhere been long before the public, it is unnecessary here to repeat them. It was at this time too, that M. Maingault repeated the experiment just alluded to, before M. Chaussier, &c. and with the same result. Hence M. Portal could not adopt the opinion of Magendie. This want of faith was not without its use. It induced M. Magendie to vary his experiments; to prove that the divisions so made of the abdominal muscles were too partial; that they did not remove the effects of the contraction of the muscles that were left; that, on the other hand, when it was complete, when there was no counter-resistance to the efforts of the diaphragm, then there was no vomiting; and on the other hand, that even when the stomach was removed, and a bladder was substituted in its place, vomiting as certain and violent as before was the consequence, if the muscles were permitted to remain. What is said in the "Précis Elémentaire de Physiologie," short as it is, is, we think, quite sufficient to put

the point for ever to rest. We have had ocular, and we conceive irresistible evidence of the truth of the proposition. But it would be out of place longer to dwell upon it.

The next article is upon the best means of guarding against the dreadful effects of the bite of a rabid animal. This paper was read to the *Cercle Médicale* (société académique dont les membres s'assemblent de temps en temps pour se rendre compte des résultats plus au moins importants de leur clinique), and afterwards inserted in the Moniteur. Our author agrees with most medical men of the present day, that we have no cure for *hydrophobia*. Hence the importance of preventing it. What is here insisted upon is cauterization, actual or potential, of the wound. This, of course, is recommended as soon as possible; but our author seems to suppose it efficacious, even after a considerable lapse of time, and for any thing that is stated to the contrary, even after the wound has healed. If there be any truth in the late very important researches of Mr. Brodie and M. Magendie, concerning absorption, this remedy would promise to be useful only if done at the moment. It strikes us, that the most easy as well as most certain remedy is immediately on the receipt of the bite, by a suitable compress and tight bandage, which any one might apply, to cut off all communication between the wound and the circulation in general. The piece should then be removed by the knife, and to obtain every security the cautery might afterwards be applied.

A longer article upon some other poisons then follows, in which we see nothing new, and from which we do not find we can make any interesting extract.

Next comes a Memoir on the membrana pupillaris, which being purely anatomical, we shall reserve to some other opportunity.

Finally, we have a notice of the last illness and death of Madame de Staël. This is interesting, not from the case itself, but from the subject of it. This wonderful woman died at Paris, on the 14th of July, 1817, in the 53d year of her age, after an illness of four months. She seems first to have been affected with dropsy, which was attended with jaundice, and considerable tenderness in the right hypochondrium. Partial relief was obtained by medicine. The disease, however, returned, and was accompanied with great and sudden weakness of the extremities, somewhat approaching in character to a paralytic attack. Additional advice was called in, and there was much diversity of opinion. The head, the lungs, the abdominal plexus of nerves, the uterus, and the spinal cord were

all in their turns suspected by different individuals. This led to vacillation in practice, while the disease made a steady progress. Inflammation and gangrene attacked the sacrum, spread rapidly, and proved fatal. The body was opened, but nothing which satisfactorily accounted for the symptoms was detected. The brain, the lungs, the spine, and the other viscera were apparently healthy, with the exception of the liver, which appeared hardened and partially tumefied. It was, however, regarded as a slight alteration, and insufficient to account for death.

"Madame de Staël a conservé l'énergie de ses facultés spirituelles jusqu'au dernier moment de sa vie; elle a passé presque toute sa dernière journée assise sur un fauteuil, conversant avec ses amis comme à son ordinaire. On l'a remise dans son lit à l'heure où on la couchait tous les soirs depuis plusieurs jours; elle y a dormi peu de temps, et dès qu'elle a été réveillée, elle a voulu qu'on lui donnât l'opium qu'elle prenait tous les soirs, non-seulement depuis qu'elle était malade, mais même depuis long-temps auparavant, pour calmer ses insomnies habituelles. Elle s'est endormie dès qu'elle a eu pris ce médicament, et peu de temps après, on s'est aperçu qu'elle avait eessé de vivre."

The body was embalmed, and transported to Coppet, to be laid by the side of her father; thus greatly increasing the interest of a spot, already a favourite resort of the intelligent and contemplative traveller.

ART. VII. *Recherches Physiologiques et Cliniques sur l'Emploi de l'Acide Prussique ou Hydro-cyanique dans le Traitement des Maladies de Poitrine, &c. Par F. Magendie, Docteur en Médecine, &c. &c.* A Paris, 1819.

FROM the property which the prussic acid possesses, of diminishing or extinguishing the general sensibility, without affecting the functions of respiration or circulation, Dr. Magendie was induced to think that it might be advantageously employed in diseases attended with morbidly increased sensibility. In a Memoir presented to the French Institute, in November, 1817, the author gave the result of his experience of the effects of this medicine in various diseases; and in the work before us, he has republished that paper with such additional information as he has been able to collect from the labours of other professional men, whose attention has been directed to this subject.

The Memoir relates chiefly to the employment of the prussic

acid in pulmonary complaints; and some cases are detailed, illustrative of its beneficial effects in obstinate and distressing coughs. The first case is that of a young lady, who had been afflicted for eighteen months with a short dry cough, which had resisted every means which her medical advisers suggested. Six drops of the acid, prepared according to Scheele's method, were given in a vegetable infusion every two hours. Next day, the cough abated, and on the fourth day it entirely disappeared. In about six months the cough returned, and the acid was used with similar success. Dr. Magendie was equally successful in curing several cases of nervous and chronic coughs, particularly in young females; and in no case did he observe any inconvenience from the medicine. He was particularly fortunate in allaying by this means, in the space of a few hours, a violent convulsive cough, which had tormented the patient for six days, without the slightest intermission. The subject was a lady of forty years of age, and of an extremely nervous habit, which could not bear the use of opiates.

Having obtained such manifest advantage from the prussic acid in the treatment of spasmodic and convulsive cough, he endeavoured to ascertain how far the distressing symptoms, which overwhelm the unfortunate subjects of phthisis pulmonalis might be relieved or suspended by the same medicine. Dr. Magendie does not enter into any detail of cases, but briefly states that he has always found it palliate the most distressing symptoms. In fifteen cases, which, during three years came under his care, he has always observed the prussic acid diminish the severity and frequency of the cough, moderate the expectoration, and procure sleep without increasing the colliquative perspirations. He also observes, that the same favourable effects were obtained in the practice of M. Lerminier, at the Hôpital de la Charité. In this institution, however, the author candidly avows that several patients in the very last stage of the disease, experienced very little or no relief, and that in two cases, the acid, given rather too frequently, produced head-ache and a kind of vertigo which lasted a few seconds. In his own practice, he has met with no such inconvenience, and he is inclined to think that a cautious exhibition of it will ensure the patient against any unpleasant effects.

From these cases, the author considers the prussic acid as an article which may be advantageously employed as a palliative in phthisis pulmonalis, and one which is free from some of the disadvantages attending the use of other narcotics, particularly opiates. A more extended experience, however, is required to ascertain if this extremely active medicine be capable of ar-

resting the progress of phthisis pulmonalis, or effectually curing it. Dr. Magendie relates two cases where he thinks there is ground for *presuming* that phthisis was really arrested in its progress by the use of the prussic acid. The symptoms in the first of these cases were certainly those which usually attend the second stage of tubercular phthisis—frequent cough, particularly at night, purulent expectoration, want of sleep, night sweats, fever, and emaciation. The acid was given to this patient in the dose of six drops in twenty-four hours, and persevered in for two months, increasing the dose to ten drops. From the first day, an amendment took place, all the symptoms gradually disappeared, and the patient was perfectly cured. The breast is still a little tender and sensible to the variations of the atmosphere.

Dr. Magendie, well aware how cautiously conclusions in medicine should be drawn, is far from thinking, that from the above fact, phthisis in its second stage has been effectually cured. We may, however, observe, that the subject of this case was of a highly bilious habit, and that the symptoms made their first appearance on the patient's experiencing severe reverses of fortune. These circumstances must not be overlooked in appreciating the powers of the medicine; for it is well known that pulmonary symptoms, extremely similar to those of phthisis, sometimes depend on an affection of the liver, and readily yield to active purgatives, and paying due attention to restore the healthy action of that viscus. The other case was an English lady, who had a short dry cough, the consequence of a violent inflammatory affection of the chest, which had been cured by the means usually employed in such cases. The prussic acid was used, the cough gradually diminished, and in the second part of the work we are informed that the patient was completely cured.

It cannot be denied that in these cases the prussic acid was successfully employed; but the question is, whether we are warranted in considering them as examples of genuine phthisis pulmonalis? We think not:—for they are far from being well marked. The symptoms in the first case were complicated with disorder of the digestive organs and a depressed state of mind. In the second instance, the patient had a faulty formation of the chest, had been subject to catarrhal affections from her infancy, and she appears to have been affected with the obstinate cough and equivocal symptoms which not unfrequently remain after inflammatory affections of the lungs, but are by no means so dangerous as those which invade with less violence. Dr. Magendie admits that these cases are not decisive, but thinks

that, should similar examples be multiplied, it is reasonable to entertain a *gleam* of hope that a substance has at last been discovered, capable of arresting the progress of this distressing malady.

Since the attention of the profession was first directed to this subject by the publication of M. Magendie's Memoir, the prussic acid has been more extensively used in various diseases, and with different degrees of success. The result of this accumulated experience is given in the second part of Dr. Magendie's little work.

The first testimony adduced in favour of the medicine is that of Fontanelles, who witnessed the *marvellous* effects of the acid upon four children labouring under hooping cough. It had the immediate effect of preventing the suffocating cough and procuring sleep. Two of the little patients were cured in four days, and the other two in a few days afterwards.

Dr. Manzoni, in his Thesis, published at Padua in 1818, relates several instances of the good effects of the prussic acid, most of which occurred in the practice of Professor Brera.

The greatest advantages are stated to have been derived from it in catarrhs, inflammation of the lungs and *bronchiæ*, and in phthisis pulmonalis. But it was not in this class of diseases only, that the great utility of the acid was eminently conspicuous. Besides the uniform advantages derived from it in the severest inflammatory complaints, in fevers, and as the means of moderating inordinate action of the heart, it was used with complete success in cases of hæmoptysis, in uterine hemorrhage, and in pains and severe diseases of the uterus, as well as in expelling worms from the intestinal canal. A noble lady, with incipient phthisis, was seized with hæmoptysis so very abundant, that her life was in imminent danger. Bleedings were employed in vain. Dr. Brera prescribed the prussic acid to the extent of a hundred drops, in the form of pills, during the night, which, he observes, *miraculously* stopped the hemorrhage.

Dr. Magendie gives an abstract of some of the cases, in which, we may observe, other means were conjoined with the acid, to which it would be rather unfair to deny some share of the merit of the cure; for example, in the miraculous stoppage of the bleeding from the lungs, venesection was used; in a severe case of pleuro-peripneumony, the patient was bled twice before the acid was used; and a woman who had been affected with schirrus of the uterus, combined with a syphilitic complaint, recovered under the use of the acid and the leaves of the atropa belladonna. In some of the most remarkable cases, the acid was given in the form of pills, a very uncertain and improper

mode of administering a substance so prone to be dissipated and decomposed by simple exposure to the air.

Having given an abstract of the cases and observations of Manzoni, Dr. Magendie declines making any reflections on them, leaving the reader to appreciate their importance, and proceeds to give a pretty full detail of Dr. Granville's cases, as published in his "Observations on the internal Use of the Hydrocyanic (Prussic) Acid in Pulmonary Complaints, &c."

Dr. Granville, by his translation of M. Magendie's Memoir, was the first who called the attention of the profession in this country, to the powers of the prussic acid; and in his "Further Observations," a work which appears to be written as much for popular perusal as for the information of the faculty, he gives a full account of the chemical history of this article; the method of procuring it; its physical properties; its agency on the system in health, and its effects in various diseases; with a selection of cases, in which it has proved beneficial. This author has formed the most sanguine hopes of the utility of the medicine, and, as it frequently happens, that the child of adoption is cherished with more than parental affection, we find Dr. Granville passing encomiums on the virtues of the prussic acid, far exceeding those which Dr. Magendie has ventured to bestow. At the very outset of his work, he states his conviction, that by the translation of Dr. Magendie's valuable paper, an interest has been excited amongst medical men, which, if *properly satisfied*, must finally lead to the adoption of a more successful treatment in cases of pulmonary consumption. We fear that Dr. Granville's experience is by far too limited to warrant such an assertion, or to decide the efficacy of any plan of treatment in a disease of such a nature as phthisis pulmonalis. Our hopes have been too often raised, but unfortunately as uniformly disappointed, by recitals of the specific powers of various remedies in consumption, not to view with distrust, any assurance that we have at last discovered an agent capable of arresting the progress of the most desolating and invincible disease with which we have to contend. Were it not so, Dr. Granville's description of the happy effects of this new medicine, is well calculated to excite a hope that we have at last succeeded. "The prussic acid, when administered to a patient exhausted by disease, and by the means employed to cure it, appears to exert an immediate influence upon the nervous system; it gradually diminishes all irritability, checks a too rapid circulation, and calms many of the symptoms of fever. If a dry cough be present, it produces expectoration in the first instance, and subsequently stops the cough itself. The spirits, before exalted,

soon feel the quieting impression of the acid; they become subdued; the speech, the countenance, even the expression of the eyes, assume a character of unusual meekness; there is a relief from pain and actual suffering; the patient feels it, and is grateful; sleep comes on undisturbed, respiration is soft, and the pulse more quiet than at other periods of the complaint, having lost the thumping beat of irritation.—In hectic fevers, it affords ease, lowers the pulse, diminishes the number of paroxysms, works a favourable change in the action of the lungs, and their circulation; while the morbid heat of the skin, and the circular flushes of the cheeks, gradually disappear. The night sweats are also suspended."—The balm of Gilead does not promise more. Such pleasing effects and such wonderful alterations, we might naturally conclude, were tantamount to a complete removal of the disease, and decisive of the perfect efficacy of the remedy in curing the worst of all diseases, whose character the description embraces. The word "cure" is only wanting to complete the climax, but we look for it in vain, and pass to the cases which the author has selected as illustrative of the efficacy of the medicine, in hopes of meeting with better success.

The first patient on the list was in the last stage of consumption; the acid was given, and amelioration of every symptom took place, but he died.

In the second case, the medicine at first disagreed with the stomach; after the second day it produced alarming depression and lowness, which, however, were only temporary; and at the end of eight days, the cough and pain of the chest had vanished. Improvement in all the symptoms took place; the disease was subdued, but not cured. The patient was sent off to Malaga, and her fate is not known.

The third case is that of the English lady who was under the care of Magendie, and already referred to.

The next two cases were patients who came to consult Dr. Scudamore, with appearances of urgent phthisical symptoms, and went away after the use of the prussic acid, satisfied that they were cured.

The sixth case, from Manzoni, is given in latin, quoted from memory. A perfect cure was effected.

The next two cases are furnished by Dr. Scudamore. In one of them which was far advanced, all the symptoms were at first alleviated, the spirits elated, and the patient became sanguine, though it evidently appeared to Dr. S. that there was no ground for indulging a hope of cure, which opinion the event proved to be correct, for she died in two months. The prussic

acid, after a month, disagreed; sometimes vomiting, sometimes diarrhœa occurring. The other case was that of a gentleman whose cough was most harrassing. At first he was *charmed* with the effects of the medicine, but it afterwards disagreed, and could not be persisted in. The patient was sent to Nice, and no tidings have been heard of him.

Here endeth the catalogue of consumptive patients; and it exhibits nothing but the usual lamentable result of our attempts to subdue this formidable disease; for if we subtract the number of dead and dying, from those which are said to have been cured, we have little reason for gratulation on the addition of this article to the Materia Medica, as far as consumption is concerned.

Under the head of *Hectic* and *Sympathetic Coughs*, some cases are related in which the acid was employed with success—such cases as every practitioner is in the daily habit of curing by improving the general state of the health, and attending to the particular organ or function which is deranged or impaired, without the risk which attends the use of a powerful and uncertain medicine. Two cases of pulmonic affection are related by Dr. Scudamore, in which the acid was used with success. In the first, cough, debility and hectic fever, supervening on typhus, were removed under the use of the acid in three weeks. The other case in which the acid, conjoined with other active means, was eminently useful, was a young subject, in whom active inflammatory affection of the lungs and hectic supervened upon fever. On the third morning of its exhibition, "a sudden faintness, and frightful debility, with complete dilatation of the pupil, took place;" these symptoms went off, however, in a few hours, and the medicine was resumed with material advantage and ultimate success.

The other instances in which it was used, were cases of asthma, chronic catarrhs, hooping cough, and distressing spasmodic coughs of long standing, connected with an irritable state of the nervous system. In all of these cases, it was attended with decided good effects, and it is in cases of this description that the prussic acid promises to be a medicine of great utility.

But it is as a means of arresting the progress of pulmonary consumption, and palliating the symptoms of the disease, when all hope of cure has fled, that our attention is particularly directed to this medicine. We have examined the grounds on which its claims for these qualities are attempted to be established, and we are sorry to say, that to us they appear very insufficient. The cases are before the public, however, and they will no doubt duly appreciate their value. With regard to the power which the Prussic acid has in arresting the progress of consumption in

its earliest stage, it is impossible from the scanty materials hitherto presented to the world, to draw a decisive inference. The principle on which it is recommended in the early stages of the disease, is the strong direct sedative influence which it exerts on the nervous system, and through its medium, on the circulation. But though this view of the manner in which consumption is to be treated, may, in many cases, be correct, yet there is reason to doubt the applicability of the doctrine to all cases. If the general opinion is well founded, that the most common species of consumption, the tubercular, is closely allied to scrofula, it may be questioned how far sedative and debilitating remedies may be rationally employed to remove the state of the lungs which gives rise to the symptoms of general excitement which are observed in the disease. There is a wide difference between the rapidity of pulse which attends consumption, and the febrile acceleration of the circulation produced by a purely inflammatory affection of the lungs, or idiopathic fever; and if we merely oppose the symptoms, without regarding the organic affection which exists in the lungs, we are but buffetting the shadow, when we should grapple with the substance. This subject deserves attention, and has acquired additional importance from the success which has of late years resulted from adopting an invigorating plan of treatment, viewing the disease in its early stage as depending on scrofulous indurations in the lungs, becoming at a more advanced period so many scrofulous ulcers.

The advocates of the prussic acid do not seem to place much faith in its power of effectually arresting the career of consumption, but in the latter stages of the disease, where such disorganization has taken place as baffles all medical skill, they look upon it as a most useful palliative of the suffering of the patient. Reasoning *a priori*, we should be inclined to doubt the utility of a medicine of such strong powers in the debilitated condition to which a patient is reduced in the last stage of consumption. As a sedative it may allay the cough, but at the same time it reduces the strength, both by its powerful effect on the nervous system and its action on the stomach and bowels, objections which cannot be urged against the use of opium, which, though frequently followed with unpleasant effects, is never productive of the extreme sufferings which the prussic acid occasions. In the last stage of this melancholy disease, one of the most distressing symptoms is diarrhœa, arising generally from ulcerations and *aphthæ* of the mucous membrane of the intestinal canal, particularly the ileum, which are met with in more than one half of those who die of consumption. The

diarrhœa is not only one of the most alarming symptoms of the disease, as it hastens the inevitable catastrophe, but it is the first symptom which interrupts that serenity, patience and hope, which characterize hectic, and render the phthisical patient such an interesting object of sympathy. In this state, opium is particularly serviceable; and the property which is urged as an objection to its use in many cases, is in this a recommendation, namely, its astringent action on the bowels. All acids have hitherto been found injurious in this state, and we do not think that the Prussic can be considered as an exception. Abundant evidence of this, as well as of its other unpleasant effects, may be found in the works which we have examined. Dr. Granville paints in glowing colours the virtues of this medicine, while he but lightly touches the reverse of the picture, where its disadvantages ought to be as faithfully pourtrayed. Vomiting and diarrhœa, great depression and lowness, prostration of strength, sudden faintness and frightful debility, are amongst the effects of the prussic acid; and though recorded by Dr. Granville's pen, he has either forgotten them, or thought lightly of them when contrasting its virtues with the disadvantages of other anodynes, and proposing it as a substitute for the most valuable article of the Materia Medica.

Our own opinion of this substance, as a medicine in consumption, may be gathered from the preceding observations, and may be expressed in a very few words:—In the early stages of the disease we consider it useless, and in the latter, unsafe.

Though consumption is so very familiar to us, we have yet too much to learn of its real nature, to be able to point out one particular medicine, or lay down one specific plan of treatment, which will cure a disease that presents itself under so many different aspects. Certain prominent features, its different varieties possess in common, but there are minor shades, which we are apt to overlook, that distinguish them, and point out an essential difference in their nature, and indicate a peculiar mode of treatment. Cough, purulent expectoration, hectic fever, emaciation, debility and extreme fatality, characterize consumption in all cases; but it admits of so much variety in its duration, in its severity, and in the influence of medical agents, that there must be a corresponding difference in the derangement of that organ which is the seat of the disease. The complaint sometimes runs its course uninterruptedly, with a rapidity which acquires it the name of *gallopping consumption*. In many cases the invasion of the disease is sudden, the sufferings of the patient are extreme, from the cough, pain, anxiety and laborious breathing, complicated with a train of distressing symptoms, which renders

death a desirable event, as a period to the patient's accumulated miseries. More frequently, however, the disease makes its attack insidiously, has made a fatal progress before its existence has been well ascertained, and its victim, unconscious of his approaching fate, glides into the grave, while his hopes of recovery are still strong.—Of those whose recoveries are recorded, some patients have got well under a low regimen, while others have recovered when an opposite plan has been pursued. One physician employs bleeding and other evacuants, with direct sedatives, successfully; while another administers stimulants and tonics with the same fortunate result. Surely, these differences do not arise from trifling or accidental circumstances, but have a deeper and well marked cause. The success which now and then attends the most opposite mode of practice, is no small proof of this. We have more satisfactory evidence of it in the appearances which the lungs present after death. The zeal and industry of some pathologists have clearly shewn, that the disorganization of the lungs, which gives rise to the phenomena of consumption, admits of considerable variety. It is by ascertaining the nature of the different alterations of structure, and the symptoms which characterize each of these, and their various combinations, that our knowledge of this fatal disease is to be advanced, and a rational hope of curing it is to be entertained. No one has prosecuted this subject with more success than the late M. Bayle, and though much, very much, yet remains to be done by his successors, we are inclined to think, that if his views of the mode in which consumption should be studied, were more attended to, we should not hear of so many specifics for the cure of a disease admitting of such varieties, and, consequently, requiring so much discrimination in its treatment. Medical men are sufficiently ready to inspect the bodies of those who die of rare and anomalous diseases, while they are too apt to neglect the opportunities of investigating by the same means, the nature of the most common and most fatal complaints. With a few eminent exceptions, physicians in general shew no desire to inspect the bodies of those who have died of consumption. The friends of the diseased can have no doubt that he has died of this dreadful malady, and the physician seems to think that no additional information, sufficient to compensate for the time and labour, can be learned from anatomical inspection. It may be asked, if the more perfect knowledge which we now possess of the morbid alterations of the lungs, has enabled us to treat the disease with greater success than formerly. Admitting that consumption should continue as fatal as ever, the information which might be derived

from dissection would lead to a more rational practice, and save the patient from being tortured with inapplicable remedies, or made the subject of experiment on the discovery of every supposed specific. Dr. Young, the author of a learned work upon consumption, is inclined to underrate the value of M. Bayle's investigations, because that writer admits, that some diseases of the chest, differing essentially from the condition of the lungs observed in phthisis, in certain cases exhibit symptoms similar to those which characterize genuine consumption. Of the kind of advantage to be derived from these investigations, we may form an idea from the author's expressions in his second chapter. "Since the state of the lungs of phthisical persons differs altogether from that which is observed in other diseases of the chest, these latter ought, incontestably, always to be distinguished from phthisis, although in certain cases, they exhibit symptoms perfectly alike." This objection is unworthy of a philosopher, who ought to be grateful for every *fact*, though he may not be able immediately to turn it to advantage. "Amassons toujours des veritées—au hasard de ce qui en arrivera; ce n'est pas risquer beaucoup."* The acquisition of knowledge is never useless, though the benefit may not be immediately apparent.

ART. VIII. *Comparative View of the Foreign and British Schools for the Deaf and Dumb.*

(CONTINUED FROM NO. V. P. 42.)

PARIS.—The Royal Institution for the Deaf and Dumb, at Paris, is situated in the Rue St. Jacques. It is a large antique building, and was formerly a convent. A high wall separates it from the street. Within this wall is a large open gravelled court. At the lodge where the "concierge," or porter lives, may be procured all the works published by the various masters of the Institution, as well as excellent portraits of De L'Epée, Sicard, Massieu and Clerc.

The court-yard is bounded on the right by some old buildings, remnants of the former convent, and only partly occupied. On the left is a smaller wing, containing work-shops and rooms for the pupils. In front is the main building, four stories high; at the right end of which is the grand stair-case, and at the left the lecture room. Corridors run along the side of the building, next the Rue St. Jacques, on each story, so that all the rooms

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* De Fontenelle sur l'utilité des mathématiques et de la physique, &c.

look to the other side, and command a view of the gardens of the Institution. The rooms on the lower story are occupied principally as work-shops ; and those on the second as school rooms, each class being in a distinct room. The corridor of this story has its walls hung with large tablets, covered by the folio sheets of Sicard's " Procédé grammaticale," on which are arranged, in a tabular form, the different parts of grammar ; according to the various steps, through which he conducts his pupils.

The furniture of the school rooms consists simply of very large wooden tablets painted black, supported at some distance from the ground on forms, and leaning against the walls, which they nearly conceal throughout. A few forms, a box of long squares of chalk, a desk for the master, some rolls of cloth to obliterate the chalk, and some necessary books complete the apparatus. The rooms on the upper floors are occupied as dormitories by the pupils, or appropriated to the masters. From the back part of this building a wing projects, in which the " Directeur en chef," Sicard, resides. The upper floors of this wing are occupied by the female pupils and their mistresses.

A large proportion of the pupils are supported by Government. Louis the Sixteenth, whose name is connected with many acts of public charity and benevolence, gave the Abbé de L'Epée an annual sum for the maintenance of a certain number of pupils. It was afterwards decreed by the States-General, that all the expences of the establishment should be paid by the treasury ; and the number of pupils who were to be admitted, at the expence of Government, was fixed at thirty-three. This number has been since increased to seventy, two-thirds of whom are boys. The economy and expenditure of the house are confided to an agent of Government, who accounts with an administrative council, composed of five honorary members, chosen from amongst persons of the highest respectability. The general direction of the Institution is entrusted to a director in chief, the Abbé Sicard. To the assistant instructor, L'Abbé Salvan, is committed more particularly the tuition of the girls. He is assisted by two " répétiteurs" MM. Duler and Salmon. The boys have four " répétiteurs." M. L'Abbée Huilard teaches the nomenclature of physical substantives. M. Pissin that of the verbs. M. Paulmier the conjugations, prepositions, and first principles of syntax. Massieu, (deaf and dumb himself) teaches syntax, history, geography, and religion.

There is also another master, a volunteer, M. A. Bebian, the author of a highly interesting and important work on the subject of the deaf and dumb, entitled, " Essai sur les sourds

muets, et sur le language naturel, ou introduction à une classification naturelle des idées, avec leurs signes propres. Paris, 1817." This gentleman, the intimate friend of Clerc, a celebrated pupil of Sicard, (now one of the masters of the Connecticut Asylum), intending to publish a work on the construction of a written language of gesture, has devoted himself for some time to the instruction of one of the junior classes in the Institution, with a view to the perfecting of his novel and most important plan; to which, however, we shall have occasion hereafter to refer more at length.

There are also in the house masters for the different mechanical trades, so that the pupils, who after five or more years return to their families, carry with them the practical knowledge of a method of acquiring a livelihood.

Besides the pupils above mentioned of the poorer class, there are many whose friends or relatives pay more or less for their maintenance and education. Among the pupils also are some foreigners (at least by birth, for as to language, all the deaf and dumb in the world may be said to be naturally of the same country and of the same æra), one of whom is a Russian, sent at the expence of the Emperor Alexander to be educated, with a view to assisting in an Institution at Petersburgh.

The foundation of the Parisian Institution was laid by the labours of the Abbé De l'Epée, a name celebrated and respected throughout Europe. It was by a contingency, such as destines most to their peculiar avocations and studies, that this excellent man was first led to undertake the office of iustructor of the deaf and dumb.

M. Ernaud, M. Perreyra, a Portuguese, and Madame de Sainte Rose, a religieuse of the cross of the Faubourg St. Antoine, were the first, says De L'Epée, who, in our age, devoted themselves to this task, without having been at all aware of each others labours. The first of these gentlemen he never saw, nor any of his pupils; but was informed by some literary friends that he had succeeded very well. The lady had by means of the manual alphabet and natural signs, instructed two pupils, with one of whom she had perfectly succeeded. As to M. Perreyra, one of his pupils, the well known Saboureux de Fontenai did him the greatest honour, and was so well instructed as to be able to publish several works, and among others a highly ingenious paper on the possibility of forming a music of colours, and another no less interesting, on the plan of his own education. He also himself undertook the education of some private pupils. Several other pupils of Perreyra also acquired a perfect command of language.

As to De L'Epée, the Abbé Sicard gives the following account of his first being led to become a teacher of the deaf and dumb, while ignorant that there had ever been any other. Father Vanin (some write it Famin), a priest of the Society of the Christian Doctrine, had been endeavouring, by means of prints, to teach two twin sisters, who were deaf and dumb, but died before their education had proceeded far. The Abbé De L'Epée, formerly of the same society, having visited the family, became deeply interested, and undertook to continue and improve their instruction. "Having been previously occupied with matters wholly theological or moral," says this excellent man, "I found myself entering on a career which was perfectly new to me." The use of prints did not appear to him suitable. The manual alphabet, which he had known from his childhood, seemed only capable of teaching them to read, he wished to lead them to understand words. The most simple signs, consisting in merely indicating with the hand the objects whose names were to be written were sufficient to commence his work, but could not lead much further; because these objects are not always within our view, and there are a great many which are not visible. A methodical system of combined signs, seemed to him, therefore, the best way to make the attempt, because by them he could recal the ideas of things absent, as well as present, and of things independent of the senses, as well as of those in relation with them.

"The first conception of a great man," says Sicard, "is an ever fruitful germ." Well acquainted with the French grammar, De L'Epée knew that every language is a collection of signs, as a series of drawings is a collection of figures, the representations of a multitude of objects, and that the deaf and dumb can describe every thing by gestures, as we paint every thing by colours or express every thing by words; he knew that every object had a form, that every form was capable of being imitated, that actions strike the sight, and that we are able to describe them by imitative gesture; he knew that words are conventional signs, and that gestures may be the same, and there could therefore be a language formed of gestures, as there has been of words.

"Full of these fundamental ideas he visited and revisited his pupils; he reflected, he meditated; he delineated, he wrote; how painful, how difficult were the first essays of the inventor. Deprived of all assistance in a career full of thorns and obstacles, he was often much embarrassed, but yet not disconraged. He armed himself with patience, and at length in some measure succeeded."

This was in fact the road which he pursued, and by such a method he formed his pupils, whose public exhibitions attracted the attention of every traveller in France.

If, however, we may credit the Abbé Sicard, the success of De L'Epée was much less perfect than that of some who went before him, and none of his pupils were ever able to express their own thoughts fully in writing. Their memory alone was cultivated; and though they could translate signs into words, or words into signs, at the will and under the dictation of the Abbé, yet they were perfectly unable to enter into conversation with those around them, to combine sentences, to write letters, or take pleasure in books. "Do not hope (says he, in one of his letters to Sicard) that they will ever be able to express their ideas by writing. Our language is not their language; theirs is that of signs. Let it satisfy you, that they know how to translate ours into theirs, as we ourselves are able to translate foreign languages, without being capable of thinking, or of expressing ourselves in those languages." Another extract from one of his Letters we shall add, to shew how almost the whole of Europe was deceived as to the success of this admirable man, never to be too much admired for his indefatigable and self-denying benevolence, but certainly most undeservedly lauded for the attainments of his pupils: "You seem absolutely to wish to make writers and authors of them, when our method can in reality do nothing more than render them copyists." "Flatter not yourself that your pupils will ever be able to express themselves in French, any more than I know how to express myself in Italian, although I can translate that language very readily." The fact is, and we state it with sorrow, but without any diminution of our respect for this noble friend of the deaf and dumb, who was rebutted by no difficulties and dismayed by no sacrifices, that none of his pupils ever learned any thing of importance to their own advancement, either in mental acquirements or in social communication, except a vocabulary of words and a few simple phrases, with the power of giving the simplest answers, such as "Yes" and "No" to the simplest questions.

Well has it been for the world that the Abbé Sicard was not swayed by the advice of De L'Epée, nor dismayed by his failure. In vain for the deaf and dumb would the latter have lived, had all his successors in France and elsewhere advanced no farther than he went.

De L'Epée published several works on the subject of the deaf and dumb, in all of which there are observations and hints of considerable importance, though his general theory, or rather

its application, is defective; and his own plan of instruction utterly incompetent to rescue them from their ignorance of written language. The first was published in 1776, at Paris, and is called "Institution des Sourds et Muets par la voie des signes méthodiques; ouvrage qui contient le projet d'une langue universelle par l'entremise des signes naturels assujettis à une méthode." The second part of this work contains the "Programme" of the public exercises of the pupils in 1771, 72, 73, and 74, with several letters relative to these. This work displays throughout his modesty and his benevolence, and at the same time shews a sensible mind struggling, often ineffectually, with a subject, obscure, difficult, and untried. Like all his other works, it is anonymous.

The occasion of his publishing it was as follows: He had been often pressed to publish his method of Instruction, but hesitated, until, at length, Saboureux, the celebrated pupil of M. Perreyra, mentioned above, wrote a work, in which he declared that it was impossible to teach the deaf and dumb in the way in which De L'Epée proposed to conduct their education. He had already asserted the same in an article relative to his own education, inserted in the "Journal de Verdun," and now called on De L'Epée to shew to him, before publication, the chapter in his new work in which he repeated the assertion. To disprove it, as well as to refute the various other oppugners of his method, De L'Epée published this work. It is now, however, abundantly clear that De L'Epée never did nor ever could, by his plan, produce a single pupil half as well instructed as Saboureux was; and that the whole of his success depended upon the memory of his pupils, and the blindness of the spectators at his public exhibitions, dazzled alike by the splendour of his benevolence and the sanctity of his name.

Saboureux advised De L'Epée to suppress gradually his methodical signs, and make use of natural gestures only, in the first steps of his pupils' instruction, gradually accustoming them afterwards to the meaning, spirit, genius, and character of the French language; but the latter confounded this suggestion, than which nothing could be more judicious, with another with which it was coupled, namely, to use the Spanish manual alphabet, which he called the Dactytology, instead of his methodical signs and broken words. And because he saw many disadvantages in the latter advice, and was prejudiced in favour of his own plan, he rejected the former, and thereby failed of ever making a distinguished pupil, as well as of seeing, that it had been by following the first part of the advice that M. Perreyra had made so many distinguished pupils, although

he himself attributed more importance to his Dactytology than it or any other mere mechanism can have in the developement of mind. And though the good Abbé justly says, that most of Saboureux's acquirements were the result of the extensive and various course of reading, through which he was led by his master and his own family, yet he does not appear to have ever imitated this important part of Perreyra's plan *. Notwithstanding De L'Epée's many mistakes, and his own want of success, he contributed materially to the amelioration and extension of the instruction of the deaf and dumb; and his first thought of improving the language of signs, and of rendering it methodical, both for the instruction of the deaf and dumb, and as the basis of universal language, is inestimable, and stamps him a man of ingenuity, of penetration, and of sound philosophy.

In 1784, De L'Epée published another work, or rather a reprint of a great part of the same work, with very many alterations, omissions and corrections, the suppression of the former second part, and the addition of an entirely new third part. It is entitled "La véritable maniére d'instruire les sourds et muets confirmé par une longue expérience, par M. L'Abbé——Instituteur des sourds et muets de Paris, &c." In the first part of this work almost every thing connected with his controversy with the dactycologists is omitted, and several wholly new chapters on the different parts of speech are inserted. The second contains an improved extension of what was in the former work, was merely a chapter on the method of teaching articulation. The third part is wholly occupied by various latin letters, and the decisions of several academies relative to a disputation between De L'Epée and S. Heinické, the teacher of the deaf and dumb at Leipsic, relative to their respective modes of teaching; a Latin oration spoken by a deaf and dumb pupil; and a programme of the public exercises of the pupils in 1775.

A translation of this work was published in London, by Cadel, jun. and Davis, under the following designation: "The method of teaching the deaf and dumb, confirmed by long experience, by the Abbé De L'Epée, translated from the French and

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* Perreyra pledged himself to answer, as soon as he had leisure, the arguments of De L'Epée in this work, but he never did so; nor did Saboureux, and De L'Epée of course thought he could not, and was confirmed in his own opinions. The fact is, that both were in error; the one, in paying too much attention to the systematising of signs, to the neglect of the cultivation of his pupils' ingenuity and invention; in the construction of phrases, and in the neglect of the perusal of serious works; the other, in his overweening and quackish lauding of the manual alphabet, to the rejection of the aid of gestures and of method.

Latin, crown 8vo. p. 960. 7s. 6d. boards, from a new edition of the original, published in 1776.

A small work had been published in 1774, by De L'Epée, which is, however, nearly all confirmed in the second part of his "Institution des sourds et muets par la voie des signes méthodiques." It was entitled, "Institution des sourds et muets ou recueil des exercises soutenus par les S. M. pendant les années 1771, 2, 3 & 4, avec les lettres qui ont accompagné les Programmes de chacun de ses exercises. Paris, par Béclard."

The Abbé De L'Epée taught a great number of masters. The Abbé Storch was sent to him from Vienna, by the emperor Joseph the second, and afterwards placed at the head of a school in the capital. The Abbé Sylvèstre, another of the pupils, established himself at Rome. M. Ulrich at Zurich, M. Dangulo in Spain, M. Delo in Holland, and others settled elsewhere; but none of them have become so celebrated as the Abbé Sicard, who at first settled at Bourdeaux, and was afterwards, as before mentioned, removed by Government to Paris on the death of his excellent predecessor. He has improved, and indeed almost perfected, the plan which De L'Epée only guessed at, but could never accomplish. Almost as much, perhaps more, is due to the latter, who was the first that called universal attention to the case of the uneducated deaf and dumb, and who first conceived the idea of completing and reducing to method the language of signs, so as to make it a perfect medium for communicating to the deaf our language of words. The modest avowal of De L'Epée to Sicard, expresses very justly the difference of their claims. "Au surplus j'ai trouvé le verre ; vous etes destiné à faire les lunettes." Sicard exceeds De L'Epée in talents, acquirement, philosophical ingenuity and acuteness ; the latter far excelled however in modesty, simplicity and benevolence.

The author of the interesting play called Deaf and Dumb, mentions a little incident which sufficiently characterizes the simpleness of heart of the Abbé De L'Epée.

The Russian ambassador at the French court paid him a visit in 1770, and offered him a present of money proportioned to the usual munificence of his empress Catherine. The other courteously but firmly refused it, saying, that he never accepted gold or silver from any person ; but that if his exertions had given him any claim upon her esteem, he hoped she would send him some person to be educated, who might introduce the instruction of the deaf and dumb into that empire, which would be to him the most pleasing and most flattering testimonial.

The play has been since translated into English, and is called

"Deaf and Dumb, or the Abbé De L'Epée; translated from the French by T. N. Bouilly, to which is perfixed some account of the Abbé and of his intitution, 8vo. 2 s. 6 d. Longman and Rees, 1801." The story of this piece is universally known. The most admired scene in the play, is that in which the author makes the deaf and dumb boy pay the following eulogy to De L'Epée in answer to the question, "Whom do you consider the greatest man?" "Science would decide for D'Alembert, and nature says Buffon; wit and taste present Voltaire, and sentiment pleads for Rousseau; but genius and humanity cry out De L'Epée; and him I call the best and greatest of all." It is painful, however, to be obliged to confess, that none of De L'Epée's pupils ever were capable of giving such an answer, however much they might adore and admire him in their hearts. The compliment therefore is M. Bouilly's, or rather perhaps we should say the intended compliment; for to us it appears little praise to compare him to men who, like Voltaire and D'Alembert, prostituted their talents to all that was base and profligate, and still less can we name in the same sentence De L'Epée and Rousseau. The one, personifying the very spirit of Christian benevolence.;—the other expending so much of his little trading stock of sentiment and sensibility in scenes of imaginary distress, as to have none to spare for the real and embodied misery of his fellow creatures. The Christian Abbé creating a new science in the cause of humanity—The infidel philosopher blighting the fields of elegant literature with the spawn of his corrupted heart and distempered imagination.

Sicard's first publication was an Essay in the "Mémoires de l'institut national des sciences et beaux arts; article litterature et beaux arts; pour l'an iv. de la république. Tome premier an. vi. 1798. Its title is Premier Mémoire sur la nécéssite d'instruire les sourds-muets de naissance, et sur les premiers moyens, de communiquer avec ces infortunés par Sicard. Lu le 13 Messidor, an. iv." In this short Essay, the same views are developed as in his larger works, to which we shall hereafter advert. He next published a small catechism for the deaf and dumb, which, however, from its being intended for Catholics, cannot be of much use in this country, except as illustrating a part of his plan. It is called "Catéchisme, ou instruction chrétienne a l'usage des sourds-muets, in 8vo prix 1 franc 50 centimes."

But his next was a more important work. It is entitled "Cours d'instruction d'un sourd-muet de naissance, &c. avec figures et tableaux, par Roch Ambroise Sicard, &c. pages 488, prix 6 francs broché, seconde edition, Paris, an. xi. 1803." This

book gives an account of his plan of instruction, as pursued in the education of his most celebrated pupil Massieu, with such improvements and corrections as more enlarged experience suggested or confirmed. Prefixed to it are two preliminary discourses, rather declamatory, on the importance and obligation of instructing the deaf, on their natural privations, and acquired restoration to society. He speaks of their state before the commencement of systematic instruction, as being like the walking automata, into which a mind is to be infused and ideas to be implanted. This may serve to make their progress in knowledge appear the more needful, but does not accord with the truth; for even before education they are possessed of minds active, energetic, and creative, full of ideas and full of curiosity. He likewise, in this introduction, gives some account of the commencement of De L'Epée's labours, and of his connexion with him.

The work itself contains several chapters on the different modes of communicating progressively to the deaf and dumb, the knowledge of our language, many of which, though mingled with metaphysical and philological reasonings, are highly interesting and important. In this part of our Essay it is impossible to enter into a critical analysis, or review of the contents of this work; we can therefore only give a general idea of it, by enumerating the titles of some of the chapters. First, mode of communication—establishing a connexion between common objects and their delineated figures—new application of this process—nomenclature—the words Being, Object, Thing—origin of the adjective—invention of one of the pronouns, and of the verb Be—active and passive qualities—theory of a preposition—generalization of ideas—new explanation of the words Being, Thing, and Object—meaning of the words, kind, species, genus, and nature—absolute tenses—personal pronouns—theory of the active and passive preposition—theory of prepositions and adverbs—theory of numeral words—theory of the articles—theory of cyphers, as illustrating the elements of a preposition. (This is one of the most important chapters in the work, and indeed, we might say, in any work on the subject)—theory of interrogation—passive and adjective pronouns—interrogative Qui—different kinds of Que—theory of the conjunction Que, in some compound prepositions, in the indicative mood only, and in the degrees of comparison. Of tense—division of time—adverbs—conjugation—relative and compound tenses—infinitive—abstract qualities—conjunctives—analysis of a period—introduction to a knowledge of the intellectual faculties—existence—spirituality and immortality of the soul—analysis of the faculties

of the soul—abstractions and figurative language—existence of God; this proved by the nature of man. Models of lessons, illustrative of some of the chapters, and a few notes conclude the book. One of these notes contains an interesting account of Massieu's pleading in a court of justice, after having been robbed; another relates to the dispute between M. Nicolai and the Abbés Storch and De L'Epée. The other two are letters from the latter to Sicard, which shew how very imperfect the plan pursued by the former must have been. We almost think that Sicard should have suppressed these letters.

Sicard's next work was this: "Théorie des signes, ou introduction à l'étude des langues, ou le sens des mots au lieu d'être defini est mis en action. Ouvrage élémentaire, absolument neuf indispensable pour l'enseignement des sourds et muets, &c. &c. tomes ii. in 8vo. pages 586 et 656, prix dix francs. Paris, chez Dentu, 1808." This work is in part a dictionary of signs, or rather of words illustrated and explained by signs. The Abbé De L'Epée had been all his life occupied in a dictionary of signs, which every one expected with anxiety. During the vacation of 1785, he devoted his whole time to its final correction, but instead of being aided by the deaf and dumb themselves, his only assistant was Mr. Muller, one of his fellow-labourers. It was at last printed, and a copy sent to Sicard. But judge of his disappointment, when he found that the whole of their labour had been spent upon a few trifling simplifications of the verbal explanations of words in the common French Dictionnairy of Richelet, as corrected by M. de Wailly. Not a single manual sign was indicated in it from beginning to end, as illustrating the meaning of the words. It was, in fact, a mere dictionary of words and not of signs, as its name purported. The author died soon after, and the dictionary of course remains unpublished, being in fact of no value.

Sicard could not again commit the same mistake. He began a dictionary, in which every radical word is explained, not by other words, but by the signs with which the deaf and dumb express the same idea, while the various derivatives are made capable of illustration in the same manner, by pointing out its signs corresponding to the suitable or the superadded syllables.

But the difference of the plan of these two works will be best shewn by an extract from each. Let us take a few words indifferently, from that of De L'Epée:

To bathe—to go into the water for refreshment.

Corpse—a dead body.

Face—the visage.

Gaiety—joy, good humour, &c. &c.

It is obvious that these explanations are of no value in the instruction of the deaf and dumb, being merely verbal; to benefit by which they must already have learned the explanatory terms, an acquisition no more easy than learning the words themselves. Some, however, of De L'Epée's explanations are judicious, and may have suggested to Sicard the general plan and idea of his work, though they are still defective as to the meaning and force of the particular words, as distinguished from others of the same class.

Thus, for instance, in the following:—

To kiss—you kiss your hand.

To hide—you conceal something.

Water—you shew some water.

The explanations will serve very well to communicate the general idea, but will not serve to mark the part of speech, or to specify the peculiar limitations of the idea.

On the contrary, Sicard's Dictionary proposes to enable the teacher to mark and communicate all the verbal, grammatical, and ideal differences; for example—

To believe—1°. Sign of seeing. 2°. Then shut the eyes, and indicate the eyes of another, to express that he sees who believes. 3°. Infinitive mood.

Belief—same signs, except 3°. sign of the abstract.

Credible—same, except 3°. sign of future, of probability, and of the adjective.

Incredible—same signs as last. 4°. Sign of negation.

Incredibly—same signs as last. 5°. Sign of adverb of manner.

Credibility—signs of credible. 4°. Sign of the abstract.

Incredibility—same signs as last. 5°. Sign of negation.

Credulous—1°. Sign of To believe. 2°. Sign of the adverb *easily*. 3°. Sign of the adjective.

Credulity—same signs. 4°. Sign of the abstract.

Incredulous—signs of *credulous*. 4°. Sign of the adjective.

Incredulity—same as last. 5°. Sign of the abstract.

Faith—signs of *belief*. 4°. Shew the heavens with a religious aspect. 5°. Sign of the abstract.

Faithful—same signs as last. 6°. Sign of adjective.

Unfaithful—same as last. 7°. Sign of negation.

Unfaithfully—same as last. 8°. Sign of adverb of manner.

Such is the manner in which he proposes to arrange and connect all relative words under their principal ideas, so as to make their progressive illustration simpler and more connected.

As to the general arrangement of this work it resembles very much Bishop Wilkins's celebrated work on an universal language. First, come the signs of the more common objects that

strike the eyes of children; such as, the human body—clothing—food and drink—city and its parts. Next, vegetables arranged under different heads; then minerals. Next, mankind—family—education—ranks—mechanical and liberal arts—employments, civil, military, &c. To this succeeds, Deity, &c; then elements—meteors—heavens—earth—parts of the world; then numbers—measures—time—money—commerce.

The first division is succeeded by various qualities. First, qualities of organic man. Second, qualities of matter acting upon the various senses of man. And the last division in the first volume is, actions (physical) performed by man, and expressed by verbs.

The principal part of the second volume is occupied by the signs of words indicative of the intellectual and moral actions of man as expressed by verbs, nouns, adjectives, or adverbs. The concluding part is wholly grammatical, containing the explanation of the various parts of speech by signs, and is the most important and useful part of the whole work.

Sicard has also published another work on universal grammar. The third edition of this book appeared in 1808, and is entitled "Elémens de grammaire générale appliqués à la langue française." It treats in succession of the various parts of speech, and gives many hints of considerable importance in the instruction of the deaf and dumb, though not intended primarily for them.

Sicard gives a public lecture every week at the Institution, and all his instructions are public. He never dictates the answer to the pupils, as De L'Epée used; questions are therefore asked by the spectators at pleasure, and there can be no self-deception or illusion, as occurred during his predecessor's time, for the pupils are left wholly to themselves to find out the answer.

On the whole, these monthly exhibitions are highly interesting, and are constantly attended by a crowd of strangers, especially by the English. To these Sicard is particularly attentive, and endeavours to explain every thing as much as possible. He and his pupils stand on an elevated stage, the wall behind which is covered with a black board, on which they write, and at either side are large oil paintings, executed by deaf and dumb artists, one of which contains full-length portraits of Sicard, Massieu, Clerc, and two or three of the female pupils; and another represents the manner in which, by different degrees of pressure on the arm, he shews how he could teach to give greater or less force to their voice in speaking. On this stage Sicard walks backwards and forwards while lecturing,

as is the usual custom with preachers in many parts of the Continent, where the pulpit is often a large gallery. Sicard's lectures are rather familiar conversations with his auditory than declamations or didactic explanations. He constantly enters into arguments with some of the persons present, whenever any objection is started. Every one is allowed to ask what questions he pleases, and an answer is always given by some one or other of the pupils. Of these answers we shall give several specimens, and we have been the more copious in their collection, because we are satisfied that they will convince every unprejudiced person of the admirable system of instruction that must be pursued in this Institution, to enable the pupils to give such solutions to the most difficult questions. We say it without a fear of contradiction, that the English system of teaching, as pursued on nearly the same principles at the three schools of Great Britain—in London, Birmingham, and Edinburgh—never did, never will, and never can, unless much ameliorated, produce any pupils capable of giving such answers. We could multiply proofs of this at will, as much as might be required. In the account of the Hartford Institution, in Connecticut, in America, which we shall publish in a future Number, we shall have occasion to speak of another of Sicard's pupils, scarcely less celebrated, and perhaps, in some respects, more talented than Massieu. His letters and publications in the English language, in two or three years after commencing its study, are superior to any that we have ever seen produced by the pupils of the British schools. It is true that such naturally endowed men as Massieu and Clerc are not met with every day, even among those who hear; but we appeal to every one who has visited the Parisian Institution, whether various other pupils of Sicard have not given answers to the most difficult questions, which have astonished even the most learned among the auditory at these lectures, and excelled any that they themselves could have produced. We know very well that there is much needless metaphysics, and untenable theory, and impugnable philosophy, mingled up with Sicard's books and plans of instruction; but we contend, that if we are to judge of the wisdom of the British and French plans by the results, and surely this is the only way, the proficiency of the pupils in the two countries does not deserve to be compared. No man ever saw any pupil issue from the English schools, of ability and acquirements equal to Massieu, Clerc, the young Russian before mentioned, and many others.

Many impugners of the English method, and among others the celebrated Dugald Stewart, and an anonymous writer,

signing himself B.——, in the Christian Guardian, seems to attribute this to the introduction of articulation into the system pursued in these kingdoms. But this cannot be the cause, for some of the pupils of the French schools are taught to articulate, and we have met with one who could speak better than any of the pupils of the British Institution, that we have ever seen. The true cause appears to us to be, that the grammatical part of their instruction, and their introduction into a knowledge of the syntax, and genius of language, is conducted in France on a much superior plan.

We shall now proceed to give a brief account of one of the most celebrated of Sicard's pupils, we mean John Massieu; the acuteness of whose answers to questions proposed by strangers, at the public lectures delivered by the Abbé, at the Institution, has been often mentioned in all the periodical journals of the day. It was in the year 1786 that this extraordinary pupil was first introduced to Sicard: he was then about fourteen years old, and had two brothers and two sisters similarly afflicted. He was accompanied by his mother, and the elder of his sisters, who was also put as a pupil under Sicard's care. One may easily form an idea of the character and manners of Massieu, when informed that he was born in a hovel, about six leagues from Bourdeaux; that he had never seen any persons but his relations, who had not even taken the pains to communicate to him any of the simplest physical ideas. All his childhood had been employed in watching a flock, and all his ideas were bounded by the narrow circle of objects which had fallen under his random and chance observation. He was in fact, says Sicard, a man of the woods, untinctured by any habit but such as were purely animal, astonished and terrified at every thing. His clouded inexpressive countenance, his timid and shifting look, his silly and suspicious air, all seemed to announce that Massieu was incapable of any instruction. Yet this man, in a few years, has excelled most hearing persons in the precision, wisdom, and readiness of his anwers to the most perplexing questions.

When asked some years afterwards by Sir James Mackintosh, the deceptive and acute question, "Does God reason?" He gave this lucid and admirable answer, "Man reasons, because he doubts; he deliberates; he decides. God is omniscient, he never doubts; he therefore never reasons." To the question, "What is time?" He answered, "It is a line that has no end, a path which begins at the cradle and ends in the grave." "What is eternity?—It is a day without yesterday or to-morrow; a line which has no end." "What is revolution?" "It is a

tree, whose roots usurp the place of its trunk." "What is gratitude?" "It is the memory of the heart." "What is hope?" "It is the flower of happiness." "What is God?" "The necessary Being, the sun of eternity, the mechanist of nature, the eye of justice, the watchmaker (horloger) of the universe, the soul of the world." "What is the difference between desire and hope?" "Desire is a tree in leaf, hope is a tree in blossom, and enjoyment is a tree in fruit." To the same question, Clerc, another pupil of Sicard, answered, "Desire is the inclination of the heart, hope is a confidence of the mind."

Massieu was asked, "What is the difference between God and nature?" "God is the first maker, the creator of all things. The first being, all came out of his divine breast. He said to the first, ye shall make the second; to those second, ye shall make others. His wills (volontés) are laws, his laws are nature."

A lady said to him, that she compared providence to a good mother. A mother said he, looks to her own children only, while providence regards all beings. "What is a bodily sense?" "A sense is a porte-idea." What is hearing?" "Hearing is auricular right?" "What is the difference between a conqueror and a hero?" "Arms and soldiers make a conqueror, courage of heart a hero."

We were frequently at the Parisian Institution, and saw much of Massieu. At one of Sicard's public lectures, he was asked, "Qu'est ce que choisir?" "C'est chercher et prendre un élite entre plusieurs objets semblables." "Qu'est-ce qu'un elite?" "C'est une chose ou personne qui est superieure aux autres par ses qualités, ou qui est excellente en son genre." "Qu'est ce que ce mot entre?" "C'est une préposition qui marque une espace dans deux objets, dont l'un est séparé de l'autre." "Qu'est ce que la faculté qui choisit les objets les uns parmi les autres?" "C'est l'intelligence, qui est la faculté de l'âme, de voir clair, de bien comprendre, de bien entendre, de furêter les choses les plus cachées, de lire dans l'âme des autres, de pénétrer les desseins, les motifs, les raisons, de distinguer les objets l'un de l'autre." "Qu'est ce que l'intelligence?" "C'est le baton intellectuel dont on se sert pour marcher sur le chemin de la verité, pour détourner de l'erreur et de fausseté." "Qu'est ce que l'imbecillite?" "C'est l'enfance intellectuelle ou spirituelle?" "Qu'est ce que la folie?" "C'est la maladie maligne de l'esprit à la perte de la raison." "Qu'est ce que le souvenir?" He defined it, and added, "Le souvenir est à la mémoire ce que la rivière est à la mer." One of the junior pupils gave another answer: "La mémoire est la fontaine, le

souvenir est le vaisseau," which is superior in our opinion, even to that of Massieu. Talking of memory one day, Massieu said, " Il n'y a point de passé pour moi; and it is almost true, so tenacious is his memory. He was once asked by an English lady, " Can every man fulfil and obey the will of God?" " Oui, avec la grace, la vertu, et les bonnes habitudes." " Qu'est ce que faculté? " Pouvoir ou puissance, ou moyen de faire quelque chose donné au corps ou à l'esprit. Faculté est un des enfans du mot (primitif ou père ou radical) faire." The young Russian mentioned before, was asked the difference between intelligence and discernment. He said, " intelligence is the faculty by which we distinguish good and evil, what is useful and what hurtful; I think discernment is the faculty of distinguishing between the greater and lesser degree of good and evil." Massieu gave a longer answer but more complex, and we conceive, not so precise or good, we did not therefore copy it.

During the Revolution, when Sicard was imprisoned, Massieu is said to have addressed the following letter to the president of the National Assembly.

Lettre de Massieu au President de L'Assemblée Nationale. Septembre 1792.

Monsieur le Président—On a enlévé aux sourds et muets leur instituteur, leur nourricier et leur père. On l'a renfermé dans une prison, comme si'l etoit un voléur, un criminel. Cependant il n'a pas tué, il n'a pas volé, Il n'est pas mauvais citoyen; toute sa vie se passe à nous instruire, à nous faire aimer la vertu et la patrie. Il est bon, juste, et pur Nous vous démandons sa liberté. Rendez le à ses enfans; car nous sommes ses fils. Il nous aime comme s'il étoit nôtre père. C'est lui que nous a appris ce que nous savons; sans lui nous serions comme des animaux. Depuis qu'on nous l'a oté, nous sommes tristes et chagrinés. Rendez nous le, et nous serons heureux. Massieu."

I had many conversations with Massieu some years after his instruction had commenced, says the author of a work called " La Corbeille des fleurs." I asked him one day, " Do you love your father and mother?" " Yes, very much." " How used you to make yourself understood by them?" " By signs."

" I concluded from the first answer, that the sentiment of filial love was no stranger to his heart; and it was pretty nearly about this period that I received a proof that it was one of the predominant feelings of his heart. His intelligence procured him an honourable place in the Deaf and Dumb Institution. The Convention decreed it to him, with a salary attached. Immediately the Abbé Sicard had read this flattering decree to his pupil, the latter, transported with joy, expressed in gesture this thought,

"I shall now at length be able to ensure bread to the old age of my mother."

Sicard wrote to me shortly after, and spoke thus of Massieu: "Acts of filial love never cost the least effort to his sensitive and grateful heart.—Giving to one's parents is repaying." Said he to me one day, "This young man thinks only of the wants of his mother; every thing that he receives, as the price of the instructions, or as a return for the pleasure he communicates, would be remitted to her, if I were not forced to remind him that he has wants himself, and that he must keep a sufficiency to satisfy them. The first motion of his soul, when he receives his salary as usher, or any gift from those whom the justness and precision of his answers have delighted, is to say to me by signs, "This is for my poor mother."

I was anxious to have more minute details relative to the childhood of Massieu. I asked him one day to write me an account of his first years; he brought me soon after the following sketch, which is entirely composed by himself:—

"I was born at Semens, in the canton of St. Macaire, department of the Gironde. My father died in the month of January 1791; my mother lives still. In my native country, we were six deaf and dumb, of one paternal family, three boys and three girls. Until the age of thirteen years and nine months, I remained in my country, where I never received instruction. "J'avoirs ténèbres pour les lettres." I expressed my ideas by manual signs or by gesture. The signs which I at that time made use of to express my ideas to my parents, and to my brothers and sisters, were very different from those of the educated deaf and dumb. Strangers never understood us when we expressed to them our ideas by signs, but the neighbours understood us. I saw oxen, horses, asses, pigs, dogs, cats, vegetables, houses, fields, vines; and when I had seen all those objects, I remembered them well. Before my education, while I was a child, I knew not either to write or read. I desired to write and read. I often saw young boys and girls going to school. I desired to follow them, and was very anxious to do so. I begged of my father, with tears in my eyes, permission to go to school. I took a book, and opened it upside down, to mark my ignorance. I put it under my arm as if to go out, but my father refused me the permission I requested; making signs to me, that I could never learn to read because I was deaf and dumb. Then I cried very loud. I again took the books to read them, but knew neither the letters nor the words, nor the phrases, nor the periods. Full of vexation, I put my fingers in my ears, and demanded with impatience of my father to have them cured. He answering, that there was

no remedy. Then I despaired; I left my father's house and went to the school, without telling my father. I presented myself to the master, and requested him by signs to teach me to write and read. He refused me roughly, and drove me from the school. This made me cry very much, but did not dishearten me. I often thought of writing and reading. I was then 12 years old. I attempted alone to form with a pen writing signs. In my childhood, my father made me pray in gestures, evening and morning I knelt. I joined my hands and moved my lips, in imitation of those who speak when they pray to God. At present I know that there is a God, the creator of the heavens and of the earth. In my childhood I adored the heavens, not God. I saw not God, I saw the heavens. I knew not whether I had been made, whether I had made myself. But if I had not known my teacher Sicard, my mind would not have grown as my body, for my mind was very poor: grown up, I should have thought that the heavens were God. Then the children of my own age did not play with me, they despised me, I was like a dog. I amused myself alone in play, or running about. I knew the numbers before my instruction, my fingers had taught me them; I knew not the cyphers, I counted on my fingers, and when the number passed ten, I made notches on a stick.

"During my childhood, my parents sometimes made me watch a flock, and often those who met me, touched with my situation, gave me some money. One day a gentleman who was passing (M. Puymorin) took a liking to me, bade me go to his house, and made me eat and drink. Afterwards, when he went to Bourdeaux, he spoke about me to Sicard, who consented to undertake my education. The gentleman wrote to my father, who shewed me the letter, but I could not read it. My relations and my neighbours told me what it contained; they informed me that I should go to Bourdeaux; they thought it was to learn a trade. My father said to me, that it was to learn to read and write. I set out with him for Bourdeaux. When we arrived there, we went to visit the Abbé Sicard, whom I found very thin. I commenced by forming letters with my fingers; in the space of many days, I knew how to write some words; in the space of three months, I knew how to write many words; in the space of six months, I knew how to write some phrases; in the space of a year, I wrote well; in the space of a year and nine months, I wrote better, and answered well to questions which persons proposed to me. I had been three years and six months with the Abbé Sicard when I set out with him for Paris. In the space of four years, I became

like the *hearing speakers*.—I asked him one day what he thought, before his instruction, people were doing when they looked at each other and moved their lips? "I thought," said he, "that they expressed ideas." "Why?" "Because I recollected that some one had complained to my father, and that he threatened to punish me." "You thought then that motion of the lips was one way of communicating ideas?" "Yes." "Why then did not you do so?" "Because I had not sufficiently watched the lips of speakers, and because people had told me that my noises were bad: as they told me that my defect was in my ears, I filled them with brandy, and stopped them with cotton." "Did you know what hearing was?" "Yes, a female relative, who heard, told me that she saw with her ears a person whom she could not see with her eyes, when this person was coming to see my father. The hearing see with their ears, during the night, persons who are walking; *Le marcher nocturne* distinguishes people, and tells their names to the hearing." "What did you think about when your father made you kneel?" "About the heavens." "With what view did you pray to heaven?" "To make it come down at night on the earth, so that the plants which I had planted might grow, and that the sick might be restored to health." "Was it with ideas, words, or sentiments, that you composed your prayer?" "It was the heart which made it, I knew neither words nor their meaning." "What did you feel in your heart?" "Joy, when I found that my plants and fruits increased; grief, when I saw that the hail had destroyed them, and that sick parents remained still sick." At these words Massieu made many signs expressive of anger and menaces. (The fact, as we have been informed, was, that during his mother's illness, he used to go out every night to pray to a particular star, that he had selected for its beauty, for her restoration; but finding her getting worse, he was enraged, and pelted stones at the star, with menaces of vengeance.) "Is it possible that you menaced heaven," said we with astonishment. "Yes." "But from what motive?" "Because I thought that I could not reach it to beat it and kill it, for causing all these disasters, and not curing my parents." "Had you no fear of irritating it, and being punished!" "I did not then know my good master Sicard, and I knew not what the heaven was; It was not until a year after my education that I had any fear of being punished by it." "Did you attribute any figure, any form, to the heavens?" "My father had shewn me at the church (chapel) of my country, a large statue of an old man, with a long beard; he held a globe in his hand; I thought he lived above the sun." "Did you know who made

the horse, the ox?" "No, but I was very curious to see them grow, and often went to watch if I could see the heaven descend upon the earth for the growth of beings. I wished much to see this." "What were your first thoughts when Sicard made you some letters and words?" "I thought that words were the images of objects around me; I learned them by memory with great earnestnes; when I had read the word God, and had written it with chalk on the board, I looked at it very often, for I believed that God caused death, and that I dreaded very much." "What did you then think of death?" "I thought that it was the cessation of motion, of sensation, of the softness of the skin and of the flesh." "Why did you think so?" "Because I had seen a dead body." "Did you think that you should live for ever." "I thought there was a celestial earth, and that the body was eternal."

(To be Continued.)

Art. IX. *Hygie Militaire, ou l'Art de guérir aux Armées, Poëme en quatre chants; suivi des loisirs d'un Militaire dans la campagne de* 1809. *Par J. L. Brad, Chirurgien Aide-Major au 4ème Régiment d'Artillerie à pied, Membre de plusieurs Sociétés savantes et littéraires.* 8vo. pp. 161. Paris, 1819.

The disciples of Apollo have seldom united his two attributes of poetry and medicine. Whether the determined hostility which the "genus irritabile vatum" have ever shewn, may have deterred us from reaching Parnassus—whether the gravity so essential to the practice of the healing art, may have rendered us mindful of Horace's maxim, "excludit sanos Helicone poetas Democritus;" or, on the other hand, whether the constant view of human misery, in all its real and substantial forms, may have rendered us incapable of the wrapt and abstracted state of mind which is necessary to clothe imaginary woe in the glowing garb of poetry—from one or all of these causes, certain it is, that in our country, at least, with one or two honourable exceptions, medicine and surgery have been studied and taught in nothing but prose.

Not so on the Continent, there medical poetry is of a very ancient date. The poem of the "Schola Salernitana," which is generally attributed to John of Milan, appeared in 1100, and contains the rules of health in leonine verses, to render it more agreeable to Count Robert, to whom it was dedicated.

Towards the end of the seventeenth century, Scipio Abeille put anatomy and surgery into verse. This manual, however, was not found so convenient as the London Dissector, or Stanley's Practical Anatomy; for, as a brother reviewer has sensibly observed, what student could admire such verses as these?

> " Le squellette est formé de trois cent soixante os
> Y compris les petits, les moyens et les gros."

So those of our profession who afterwards yielded to the inspiration of the muses, chose subjects not connected with medicine, and our readers are not probably aware that among the most successful we may place Fracastor, Redi, Haller, M. A. Petit, Geoffroy, &c. &c. Poetry, however, was only a recreation to them, as music was to Boerhaave and Sabatier.

M. Brad is an army surgeon, not however unknown to literature, for he has published an esteemed work on Italy. The object of the present work is not to give a system of military surgery in verse, but to celebrate a department of science so useful and interesting to humanity. The author feels naturally indignant, that in all the poems which have been written on the late war, no mention was made of those " qui méles aux guerriers sans en partager les fureurs, n'ont d'autre soin que de réparer les maux de la guerre." To avenge then the military surgeons of this neglect, and to celebrate their exploits, is the object of this poem.

M. Brad, being probably on half-pay, begins his poem by paying " aux chefs de service de santé un juste tribut d'admiration, &c.;" just as we should in this country dedicate our works to Lord Palmerston or Lord Melville. He proceeds to give a rapid sketch of the art of healing, and begins at the epoch when the heroes of Greece were no less distinguished for their courage than for their skill in medicine. He then depicts the lamentable state of our art in the time of the Roman republic; and in speaking of the age of chivalry in France, recals to our remembrance the times that the hand of friendship, but more generally of modest beauty, exercised the art of surgery.

> " Tandis que de beaux yeux, dans le cœur du héros,
> Sans pouvoir les guérir, portaient des coups nouveaux."

It was during the reign of Henry the Fourth, and under the auspices of Sully, that the first asylums for the wounded were opened in France. In tracing the history of the rise and progress of our science from that period, M. Brad does not fail to scatter some flowers on the tomb of the unfortunate Lavoisier.

We have next an address to medical students entering the army.

" Quel honneur est le vôtre, ô vous qu'il doit charger
De veiller sur les maux, et de les soulager!
Si le sang précieux, versé pour sa défense
Offre tant de lauriers aux champs de la vaillance,
Que de lauriers pour vous, quelle immortalité,
Si, par votre savoir, ce pur sang arrêté
Sauve un homme à l'Etat, un soldat à la gloire,
Et rend moins douloureux le prix de sa victoire!"

In the course of his poem, the author relates some interesting anecdotes of facts which occurred to the military surgeons during the Revolution; and among others his own meeting with the friend of his infancy, and saving him from certain death. He also details at some length the heroic conduct of M. Percy, who, after the battle of Biberach on the Lech, saved a number of emigrants about to perish, by hiding them in the cellars and granaries of the convent of the Franciscans, where he regularly attended and dressed their wounds. In the same manner he rescued the Comte de Roquefeuille, who was wounded mortally before Augsbourg, and placed him in the hands of the surgeons attached to the army of Condé. For this he was arrested, for the third time, as suspected.

" De même aux champs du Rhin et de la Germanie,
Immolant son repos à la philantropie,
Percy, plein d'un courage inspiré par son cœur,
Des émigrés français consolait le malheur,
Les sauvait de la mort; et, d'une main pieuse,
Les cachant aux regards d'une horde ombrageuse,
Leur donnait en secrèt tous les soins de son art,
Leur faisait de ses soins un utile rempart;
Et, guéris, rassurés, loin de la tyrannie,
Sous les drapeaux du roi leur rendait la patrie."

* * * * * * * *

" Que n'as-tu pu survivre à ces temps d'anarchie?
Tu dirais, Roquefeuille, à la France, à ton roi,
Ce que, dans ton malheur, mon art a fait pour toi.
Au lieu de vils bourreaux, d'ennemis sanguinaires,
Dans tous nos chirurgiens tu ne vis que des frères;
Et Percy, t'accueillant, te pressant dans ses bras,
Te console du moins aux portes du trépas."

In the third canto, M. Brad describes the arrangement to be made by the surgeons before action, and gives us the description of an " ambulance légère:" he describes the surgeons running along the line, raising the wounded, and removing them from the balls of the enemy, and then returning amidst the fire and slaughter, to repeat their offices of humanity. He introduces rather a tame description of a surgeon who is killed in this oc-

cupation. He is more happy in delineating the heroic courage of a young surgeon, Bonnet, who, charged with the care of twenty wounded officers, in a house situated in a remote part of Castille, suddenly sees this asylum surrounded by armed peasants. His brave defence and death are given with great force and energy in the following lines :

" Bonnet, dont l'amitié redouble le courage,
Se lève, s'arme, court leur fermer le passage.
Malheureux! peux-tu seul arrêter un torrent?
De toutes parts il roule, il gronde.... ; au même instant,
Sur les blessés gissans au lit de la souffrance,
Mille coups ont mis fin à leur triste existence.
Bonnet, voyant périr ses derniers compagnons,
Se dégage, s'élance, et du haut des balcons
Se jette, et va du moins se donner à lui-même
Un mort moins affreuse en ce péril extrême:
Sur le pavé sanglant il tombe fracassé...."

In the third canto a well known historical fact is made the subject of a very pretty episode. In the war of 1746, after the battle of Exilles, the wounded were taken to Briançon, where, as no idea had been entertained of the fatal termination of the day, no preparations had been made for their reception. M. Daudifret, lieutenant of the king, immediately sold all his plate to help the sick; and his wife, just at the point of lying in, took herself the charge of the hospitals, and died in acquitting herself of this pious office.

" Aux yeux de nos guerriers et d'un peuple attristé
Daudifret meurt.... ; son nom à l'immortalité
S'envole au sein du dieu qu'implore la misère,
Et qui fit la pitié pour consoler la terre."

Peace arrives, and our author then proceeds to trace the best means of regulating hospitals, their construction, government, &c. In speaking of the diseases which arise from defect in the economy of the hospitals, he introduces an account of the different epidemics which have taken place among the French; and concludes his poem with a description of the " Hôtel Royal des Invalides," and the king's visit to it.

We beg leave strongly to recommend this little poem to our readers. It appears to us to possess great merit; but as we are not presumptuous enough to pronounce on the poetry of another nation, the extracts we have made, and the opinion we have given, are those of M. Laurent, in the " Journal complémentaire des Sciences Médicales." The poem itself appears to us to merit still higher consideration than the French re-

viewer ascribes to it. The subject is interesting, and the verses are formed on the best models.

We cannot here help observing, that we should be glad to see the fine arts and elegant literature more generally cultivated by the profession in our country. Independently of their effect in enlarging the mind and improving the heart, we have only to refer to the late Dr. Currie, to shew the charm and interest which such acquirements are calculated to throw on science—to prove how much more effectually the prejudices of the public will yield to the arguments of philosophy and reason, when these are clothed in the garb of eloquence.

Let us, however, beware, says M. Percy, in his beautiful eulogium on Sabatier, of undertaking too much; but still let us not fear to strew the thorns which cover the barren field of our art with roses gathered on more favoured soils. Let us yield to our taste for the fine arts, but always with moderation, lest it should rob a science which has MAN for its object, of that time which it has a right to demand.

ANALECTA.

1. *On the Health of the "Forçats Galeriens," or Galley Slaves, by M. L. R. Villermé.*

The Journal Général de Médecine for September, contains an interesting article on this subject. The forçats galériens, formerly employed aboard the galleys, are now made to work in different ways; in France, in the ports and on the roads; in Russia and Hungary, in the mines; in Switzerland, in cleaning the streets, &c.

The code of France states, that these persons shall be employed in the most painful kinds of labour, and when the occupation shall permit, shall drag a ball, fastened to the feet, or shall be attached, two and two, to a heavy chain. The periods for which the criminals are condemned are from five to twenty years; or they are perpetual. The first may be compared to the condemnation *ad opus publicum* of the Romans; the second to that *ad metalla*. Some of the feeble are exempted from the severity of the law. The rest are employed at different ports in France, confined in large buildings termed *bagnes*, from the Italian *bagno*; or on board vessels, "hors de service," termed *pontons*.

The forçats take their departure at certain times from the prisons of the interior. A small number is soon increased by the addition of such as are found in the prisons in their route. They form what is termed a *chain*, and on their arrival at a great port, as Brest, consist of from 200 to 400. They carry with them the necessary provisions and utensils, and are conducted by a military escort. Each criminal is confined by a *collar of iron*, formed of two pieces, united before by a strong hinge, and behind by a rivet clinched by a hammer. This collar is fastened by a chain six or eight feet in length, and this again to a longer chain, which, receiving, perhaps, a hundred of the former ones, is termed the *chordon*. Each forçat has a leather belt round the body, by which the weight of his chain is supported and carried from the neck.

3. The *chain* travels four or five French leagues a day, frequently halting and passing the night on the ground, scarcely covered with straw. Those who are sick are carried on the baggage waggon, or by the others; and the bodies of those who die on the way are carried to the next town. This journey is so extremely fatiguing, that it is dreaded more than several years spent in the "bagne." The weather may be unfavourable and inclement, the clothing scarce, the nourishment bad, and the sleep broken; so that many die on the way, or soon after their arrival.

4. On their arrival, the forçats perform a sort of quarantine; at Brest, in the marine hospitals. In the next place, the iron collar is to be detached from the neck. The forçat sits on the ground, placing his head near a large wooden block, on which there is an anvil; then by means of a hammer and punch, the rivet is forced out. There are examples of the punch having slipped, and of the hammer having fractured the skull of the poor culprit. After this, what is termed the "*manille*," a piece of iron of the proper form, is fixed to the leg; to this is attached a chain of ten feet in length, to the end of which is fastened another forçat, or a short chain, by which the forçat drags a heavy ball. After being *ironed*, the forçat is dressed in a particular manner; he is then allowed sufficient repose, and he is at length conducted to the "bagne."

4. In the "bagne" he meets with 2000 or 3000 persons accoutred like himself, and confined to hard labour, to whose number he is about to be added. The forçats are extremely crowded in the "bagne," and ill accommodated in the night. They are tolerably well clothed, and their diet does not appear deficient. The most culpable are confined to heavy labour; those whose term is nearly expired, are separated from the companion to whom they are attached, and are employed in the hospitals, or in manufactures of straw, pasteboard, &c. They are punished severely for any misconduct, by stripes on the back with a cord. They are addicted to intoxication whenever it is in their power. Their chains are often the cause of sores, and even of fractures; and the habit of wearing and training them induces a peculiar gait, by which the forçat is afterwards readily recognized. When sick, they are conveyed to the marine hospitals, and enjoy all the accommodations of those Institutions. The following table presents the degree of sickness and mortality among the forçats, some of whom retain a good state of health, and even acquire a degree of plethora.

Years.	Total Number of Forçats.	Total Number of Sick.	Deaths.
1815	2,920	172	62
1816	3,131	156	58
1817	2,943	157	62

Of the 62 deaths in 1817, there were 19 from phthisis pulmonalis; 6 from pulmonary catarrh; 5 from peripneumonia; 5 from ascites—enteritis; 7 from diarrhœa; 8 from fever of different kinds; 12 from other diseases, by each of which only one was affected.

5. At the end of the term prescribed, the forçat is loosed from his chain, and receives clothing and assistance to convey him to his home, where he remains for a time under the superintendance of the police.

2, *Gangrenous Affection of the Face, and of the Pudenda in Children.*

The Nouveau Journal de Médecine for September, and the Journal Complementaire for October, each contains an account of a gangrenous affection principally incident to children, and affecting the face, or the female pudenda. Such an affection is noticed by Fabricius Hildanus, Huxham, Dease, Underwood, William Burns, Baron, &c. Dr. Parr seems to allude to it under the denomination of Nome. An accoun tofan important and partial ulceration of the pudendum in children, was published by Mr. Kinder Wood in the Medico Chirurgical Transactions; * and a paper on the gangrene of the face in children, was published in the Edinburgh Medical Journal, by Dr. Hall, in the same month as that published in the Journal Complementaire.

The conclusions of the author of the paper last quoted, M. Isnard Cevoule, are the following:—

1. That the gangrenous affection of the children is the same, whether it attacks the mouth or the pudendum.

2. That it is always the consequence of one, and rarely of several ulcerations of the mucous membrane; that it begins at the internal surface of the cheeks or of the labia, and proceeds from within outwards.

3. That it is at first purely local; and that it is only afterwards that general symptoms are observed.

4. That it is not contagious.

5. Lastly, that the best means of cure, is the application of the acutal cautery.

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* Vol vii. 1. Art 3; 1815. † Bulletins de la Faculté de Médecine, 1816.

We are far from adopting all these conclusions. But they are calculated to excite inquiry. We have therefore copied them.

The paper contained in the Noveau Journal De Médecine, is the relation by M. Léveillé, of a case of gangrenous affection of the face occurring in the *adult*, and proving consequently that this disease is not confined to infancy. We observe too, that the age of one of Dr. Hall's patients was twelve. M. Isnard-Cevoule also notices a case of this affection as occurring in a woman about 30 years old; and M. Baron has communicated to him another instance of its occurrence in adult age.

3. *Internal Uterine Hæmorrhagies.*

In the Journal Général de Médecine for September, there is a sketch of an important paper by M. L. C. Deneux, on what he has termed Internal Uterine Hæmorrhage. Under this denomination, M. Deneux comprises "any accumulation, extravasation, or infiltration of the blood, into some part of the organs of generation, or of the envelopes of the fœtus; first, the infiltration of blood in the texture of the unimpregnated uterus, or the detention of the menstrual blood in its cavity; secondly, the accumulation of the blood in the uterus, or the (its) peritoneal cavity, in the impregnated state; thirdly, and lastly, sanguineous humours of the external parts of generation and of the vagina."

This paper is illustrated by cases. M. Deneux, in the first place, details some cases in which blood was effused between the placenta and uterus. This effusion arises from the lesion of the utero placental arteries and veins; it may occur at all periods of gestation, or during labour; its effects are proportionate to the quantity of blood effused into the sort of sac formed between the uterus and placenta; it is rarely attended with danger to the mother, but it is almost always fatal to the fœtus.

In the second place, M. D. describes an effusion between the uterus, the placenta, and the external membrane of the ovum. This effusion frequently occurs during the last six months of utero-gestation, arises from the same causes as the preceding one, and produces effects proportionate to the degree of effusion.

Effusion of blood between the Epichorion and the Chorion occupies the third place. It is little known; but M. Deneux has observed it in ova expelled about the first or second menstrual period subsequent to conception, and still possesses a preparation displaying this kind of effusion. This affection is confined to the six or seven first weeks of utero-gestation.

In the next place, M. Deneux describes an effusion between the Amnion and the vessels which form the umbilical chord. It is a rare affection. M. D. has seen one case of it only.

In the fifth and last place, M. Deneux gives some cases in which several kinds of the effusion co-existed in the same patient, an occurrence which takes place in the early, or in the late periods of gestation.

4. *Vomiting successfully induced by Transfusion of an Emetic into a Vein.*

A middle aged man swallowed a large bone, which stuck fast low down in the œsophagus, from having assumed a transverse direction; and notwithstanding innumerable attempts were made by different surgeons during three days, both to extract it and push it down into the stomach, it remained fixed in its place. At the end of the time mentioned, the man came into the hospital, his strength greatly exhausted, his breathing laborious, the face and extremities livid and cold, and the bone continued immoveable, as the patient was unable to swallow a single drop, which rendered the exhibition of an emetic in the usual way impossible; an incision into the œsophagus was impracticable from the low situation of the foreign body,

and as the symptoms became every moment more urgent, it was determined to inject a solution of tartar emetic into a vein. For this purpose, two grains of that substance were dissolved in half an ounce of luke warm water, and the whole injected into the median vein. At the expiration of fifteen minutes, which the patient passed under some feelings of anxiety, severe retching and free vomiting suddenly took place, during which the bone was ejected quickly and forcibly from the mouth. With this the whole of the patient's distressing symptoms ceased, and the slight contraction which remained at the place where the bone had stuck, shortly disappeared.—*Bericht über das klinische, chirurgisch-augenaerztliche Institut des Universitaet zu Berlin, abgestattet vom Director des genannten Anstalt Geh. Rath Graeffe*, 1819.

5. *Rupture of the Uterus, successfully treated.*

A woman, aged 33, of a feeble constitution, was in labour with her fourth child. A slight obliquity of the head offered some resistance to the uterus, which, weakened by a fall that the woman had met with a fortnight before, was torn transversely in its fundas, and the child passed, with its accompaniments, into the abdominal cavity. On the woman's sudden cry, the accoucheur immediately discovered the accident by the emptiness of the uterus, the form of the belly, through the integuments of which the movements of the child might be distinguished, and the labour pains changing for continued and violent agony. The Cæsarian operation was the only resource; a consultation was held; but, from the distance at which the members composing it lived, it did not take place till twelve hours afterwards.

The incision was made on the linea alba, about two inches below the navel, and two above the pubis. The child was found dead, and a considerable effusion of blood mixed with the waters of the amnion. The intestines were inflamed, and some part of them were of a slate colour, the consequence of long pressure; the edges of the wound were kept in perfect contact by a suture, two lateral compresses, and a bandage. Antiseptic drinks, and injections with camphorated brandy, were administered, together with fomentations of a similar nature. At the end of six weeks the two wounds were cicatrized; but there supervened an inflammatory tumour, a little above, and to the side of the navel, which subsided by means of emollient applications: from that period the patient improved, and was quite cured fifteen days afterwards. She is now perfectly well.

The above case, by MM. Bernard, Latouche, and Jopet, is extracted from the Journal Complémentaire du Dictionnaire des Sciences Médicales, Decembre 1819, the Editor of which adds the following note:—

"We give this observation, incomplete as it is, as it was transmitted to us, without adding to it such reflections as must arise in the mind of every reader, particularly relative to the plan pursued after the operation. It appeared to us curious, as well calculated to display the immense resources nature displays to oppose powerful causes of destruction, in spite of the increased energy afforded to the latter by want of reflection or skill.

6. *Operation for the Stone.*

A boy, aged thirteen, was received into the Hospital of Neves, affected with stone in the bladder. He was big for his age, but of a feeble constitution. On sounding him, a large stone was distinctly felt at the right side of the posterior part of the bladder, smooth, oval, and about the size of an almond in the shell.

After being prepared by medicine, and again sounded, the operation was performed in Frère Cosme's method, the lithotome being at No. 7. The first step of the operation presented nothing remarkable; the forceps being introduced along

the fore-finger of the left hand, the stone was taken hold of; it was now evident that it was larger than was at first supposed. On drawing very gently, the child screamed, and said that they were tearing out its bowels. Fearing to have pinched the bladder, the surgeon let go, and he was now satisfied, by the instrument and the child's calmness, that the bladder was uninjured. On again attempting the extraction, the same agony was experienced. The surgeon then withdrew the forceps, and told the assistant that the stone was adherent; that it was larger than had been imagined, because they had judged of its size by the portion which was uncovered in the bladder, while the remainder of it appeared to him to be in the right ureter, as the stone of a ring is held in its rim, or like an acorn in its shell; and he observed, that he ought to have foreseen it, from the stone always keeping in the same place. Another surgeon now introduced the forceps, but with no better success; and an attempt was made to introduce a bistoury, to cut the membranous ring upon the calculus, but the finger could only reach the naked portion of the stone, and this plan was abandoned. Remembering Littre's plan, the surgeon again introduced the forceps, seized the stone, and, instead of drawing it, made the instrument slip from the free portion of stone to that which was enveloped by membrane; he ascertained that he had got there, from no noise being made in opening or shutting the instrument: in this way he clawed off (machait) the ring from above and below. His object was to produce inflammation, and to destroy the bag by suppuration, so as to let the stone escape. Every means was employed to allay the irritation, which, however, was not very great. The child was, however, attacked with a fever, complicated with worms, but recovered. The urine came by the usual channel, but a small fistula remained in the perineum, through which a small quantity of urine passed. The surgeons were now preparing to sound him, preparatory to a second operation, when his father took him out of the hospital. The operation above detailed took place on the 4th of May. On the 9th of November following, the boy was again brought into the hospital, carrying the stone in his hand. A month after leaving the hospital, pain and difficulty of voiding urine again came on as before the operation. A tumour formed in the perineum, which opened the cicatrice at the end of two months; during its formation, blood and pus were discharged with the urine. The stone gradually occupied the apertnre, and a country surgeon, with some considerable effort, got it out. The wound in the perineum healed, with the exception of a small fistula, for which he was brought to the hospital: by the introduction of an elastic gum catheter, this was quickly healed. The stone was of the size of a hen's egg, a little flattened, very solid, weighed 2 ounces 4 drams, brownish yellow in colour: its whole surface was pretty smooth, excepting its lesser extremity, which was unequal, and full of asperities and depressions, in which the edges of the ring were inserted; a circular mark, extending to a third of the length of the calculus (2 inches 4 lines) was also seen. M. Laurent, in his report on this case, makes some sensible remarks, blames M. Aubiny for adopting Littre's rash method, and gives Sabatier's opinion of it.—*Journal General de Medecine, Decembre* 1819.

7. *Sir Charles Morgan on Life.*

The French Reviewers differ with us respecting Sir Charles Morgan's work on life. Thus M. Reveillé Prisée in the "Journal Général," speaking of it, observes; "This work, in general, is full of learning and good principles, it is neither a bad sketch or a heavy composition. The author considers science in a very elevated point of view; he aggrandizes it and makes the reader think. Nevertheless, we pay for these advantages, obscure reasoning, interminable periods, unconnected ideas, bad style, render it painful to read it." We are anxiously looking for the French accounts of Mr. Lawrence's book, and we shall probably, in reporting them, add a few reflections of our own. We have been blamed for not entering

on this subject before. The above would be a sufficient apology; but we have had other reasons. While the controversy was on paper it was all fair, and we should have probably joined in it; but the moment it was extended to personal reflections and personal injury, we drew back. We cannot defend Mr. Lawrence, because we differ from him; but we should scorn to sanction any thing which strikes at the liberty of thought and speech. It is too like Galileo and the Inquisition.

8. *Vaccination in Denmark.*

We have extracted the following Statement from a Statistical work on Denmark, lately published in the Danish language.

Vaccination was introduced into Denmark in the year 1800. In that year, a society was formed at Copenhagen for vaccination, and a few days after a commission was appointed by the king, which is still in activity.

In a circular of the 13th July, 1816, addressed to all magistrates and bishops, it was ordered, that every one who had not had natural small pox, should be vaccinated; in default of which, the individuals could not be received at confirmation, admitted into any school or institution, nor received as apprentices to trades, or as members of any public institution or government office. Moreover, no priest was permitted to join in marriage, those who had not been vaccinated or had the small-pox. In the event of the small-pox appearing in the country, all the inhabitants of the villages must submit to vaccination. The same in a town; all communication to be stopped between villages and houses where the small-pox appears, under pain of imprisonment, and fed on bread and water; the proprietor of a house, when the least trace of small-pox appears, is obliged forthwith to give notice of it to the curate, magistrates, and director of the police.

There is an Institution for gratuitous vaccination at Copenhagen. Physicians and curates in the country vaccinate gratuitously. The general commission publishes every year a general report of the results of vaccination, and honorable mention is made of persons who have distinguished themselves by their zeal for its propagation.

The number of persons vaccinated in Denmark, (without including the two dutchies of Holstein and Slesvic,) at the end of 1817, was 343,167. Since 1808, when the small-pox was epidemic, it no longer exists, and is totally unknown.

The same regulations apply to the dutchies of Holstein and Slesvic, where in a population of 600,000; the number of vaccinated amounted in 1814, to 75,110.

It is remarkable that in 1791, a shoolmaster in the country, at Holstein, named Plett, had introduced a sort of vaccination, and was very zealous in 1812, in its introduction.

QUARTERLY LIST OF NEW PUBLICATIONS.

ANATOMY AND PHYSIOLOGY.

Bock. Handbuch der pracktischen Anatomie.
Gurlt. De Venarum Deformationibus, adnexa venæ cavæ inferior. aberration. rarior Descript.
Hering. De Osteogonesi Valvularum Cordis Præternaturali. c. iii. tab. aer.
Leupoldt. De Systemat. Gangliaris Natura.
Pech. Osteogacorma, ejusque Specici Insign. Descript.
Prochaska. Physiologia.
Rouze, J. L. M. Nouvelle Physiologie Médicale. Paris.

BOTANY.

Juch, C. W. Die Giftpflanzen. Augsbourg.

CHEMISTRY, MATERIA MEDICA AND PHARMACY.

Arnemann. Pract. Arzneymitttellehre 6te. auflage von Kraus.
Döbereimer. Elemente der Pharmac. Chemie.
Ebermaier. Uebersicht der Kennzeichen der Aechtheit smmmtl. Arzneimittel. 1ste Auflage.
Harless. Der Republicanismus in der Naturwissensch. und Medizin auf der Basis der Electricismns.
Kerekes. Betracht über Chemische Elemente.
Repertorium der Pharmazie v. Buchner, 7e Band.

MEDICAL JURISPRUDENCE.

Hesselbach. Handb. für gericht. Aerzte u. Wundärzte bei gesetzmässigen Leichenöffnungen.
Runge. De Novo Methodo Veneficium Belladonnæ daturæ nec non Hyoscyami explorandi.

MEDICINE AND SURGERY.

Beck. über Vorzüge der Lappenbildung bei der Amputation.
Becker, G. G. Kurze jedoch gründliche Anleitung wie man gesund bleiben kann. 8vo. Leipzig.
Bernstein. über Verrenkungen und Beinbrücke. 2te. Ausg.
Bolzano, P. E. De Momentis Diagnosticis quibus Phthisis pituitosa ab ulcerata dist potest.
Braun. Selectus gravioris Momenti Locorum ex vet. medicor scriptis.
Bressy. Elémens de Thermométrie Médicale. 8vo. Paris.
Caffin, J. F. Traite Analytique des Fièvres essentielles. Paris.
Carault, E. Essai sur les Ulcères de la Peau. 4to. broché. Paris.
Consbruck. Taschenbuch der Pathologie.
Ebermaier. Taschen. d. Chirurgie. 2 v. B.
Hecker. Heilkunst auf ihren Wegen z. Gewissheit 4te. verb. Aufz,
——— Kunst den Ausgang der Krankheiten vorher zusagen.
——— Lexicon Medicum Theor.-pract.

Horsch. Handb. der besondern Krankheitslehre.

Hufeland. Conspectus Morborum secund. ordin. adj. characteribus specif. dianosticis.

Kausch. Memorabilien der Heilkunde, 3 Bd.

Klein. Resultate meiner verrichteten Blasenschnitte 2te. Abths. m. 14 kupf.

——— Kurze Beschreibung einiger seltenen Wasserköpfe.

Krauss. Die Schutzpocktenimpfung in ihrer Entscheidung.

Kressig. System der prakt, Heilkunde, 1ste. Bd. Heilgrundsätze, 2de. Band.

La Médicine Vengée, Poëme en quatre chants. 8vo. Paris.

Mercy, Chev. de. De l'Enseignement Médical dans ses rapports avec la chimie. 8vo. Paris.

Nietsch über vorborgene Entzündungen und die daraus entspringenden Körperlichen Uebel.

Nonne. Ausschweifungen in der Liebe.

Pfeufer. Der Scharlach 1818, zu Bamberg.

Schreger. Grundriss der Chirurg. Operationen. 2te. Ausg.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Guericke, J. E. T. einige Abhandlungen über erhebliche Gegenstände aus der Gebiertslehre. 8vo. Hannover.

Kummer. De Uteri Steatomatæ Annotation. quædam, Insign. ejusmodi Tumoris Observat. Illustr.

Rizzio, Lorenzo. Memoria sopra una gravidanza estrauterina. 8vo. Cataniæ.

Schmidt gesammlete Obstetricische Schriften M. A. E. von Einsackung der Mutter-kuckens.

OPHTHALMOLOGY.

Baerens. Dissertatio sistens systemat. lentis Christallinæ Monographiam Physiolog.-pathol. Pars I.

Landmann. Diss. Morb, cerebri Oculique singular. paucis de exophthalmia, exophtalmo, et ophtalmaptos.

Müller, J. Anatom. u. physiol. Darstellung des Auges.

VETERINARY MEDICINE.

Schmidt. Thierärztliches Receptenbuch.

Printed by Anderson and Co. Broadway, Blackfriars.

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THE

QUARTERLY JOURNAL

OF

FOREIGN MEDICINE AND SURGERY.

MAY, 1820.

ART. I. *Mémoire sur l'Œdème de la Glotte, ou Angine Laryngée Œdémateuse, par M. G. L. Bayle.* *

THE diseases of the larynx have lately attracted the attention of physicians in a particular manner, both in this country and on the Continent; and whether we consider the dreadful sufferings of the patient, or the fatal tendency of the disease, we shall be ready to admit that no class of morbid affections demands that attention more imperiously.

In this article we shall endeavour to present a short sketch of the present state of our knowledge of this subject, extracted from Foreign and British publications, beginning with an account of the valuable but imperfect paper before us. The writer observes, that the disease of which he treats may be termed, "Angine Laryngée Œdémateuse," or œdematous cynanche laryngea, because it consists of a serous infiltration of the membrane which lines the larynx, of which all the symptoms are the effect. The diagnosis of the affection is easy; the characteristic symptom is a constant difficulty of breathing,—the inspirations being, however, particularly difficult and hissing, whilst the expirations are easy,—augmented from time to time to attacks of suffocation, during which the inspirations are extremely difficult, noisy, and sonorous, but the expirations still easy.

This affection is either primary or secondary. When primary, it appears to consist in a catarrhal or inflammatory affec-

* Nouveau Journal de Médecine, de Janvier, 1819.

tion of the larynx. When secondary, it depends sometimes on an abscess of the larynx or adjoining parts, sometimes on ulceration or caries of the larynx, sometimes on a simple or complicated phthisis laryngea; in other instances it has been occasioned by morbid affections, acute or chronic, especially fevers, which have acted by irritating this part.

We particularly object to this adoption of the word œdème, as a general term and designation for this class of morbid affections. The primary disease appears to us to be simply inflammation, inducing a thickening of the membrane, and closing the rima glottidis, or tubular cavity of the larynx or trachea. What the author has denominated the secondary affections are distinct diseases, namely, abscess, ulceration, &c.; they demand curative measures totally different, and can be confounded under a general term and general view only at the expense of the patient's life. We also object to the term œdème altogether, and would beg to retain that of inflammation, connecting with this expression the idea of its usual effects.

This morbid affection sometimes commences even by suffocation, with pain in the larynx; but more usually the attack is denoted by a sense of uneasiness rather than pain, about the larynx; the patient endeavours to disembarrass himself by making forcible expirations, and expelling mucus collected in the part;—the voice is hoarse—there is no fever—and little general disorder or complaint. In the course of a few days, all these symptoms are augmented, the breathing becomes gradually oppressed with hissing, attacks of greater dyspnœa, and there is, perhaps, a degree of cough. From this period to that of several more days, or perhaps weeks, there are attacks of suffocation, which last from five to fifteen minutes, the inspirations being hissing and difficult, but the expirations still easy: after the attack the breathing may become again as easy as before, or it may remain somewhat more difficult: a repetition of this suffocation is sometimes experienced in a few hours, sometimes not for some days. These attacks also become more and more distressing and alarming, more frequent and of longer duration, and often occur during sleep; in the intervals the breathing may, however, still become easy, and the voice less hoarse: the appetite, the pulse, and the general health suffer less than might be expected, and experience alone suggests the imminent danger in which the patient is placed. In the more violent attacks of suffocation, the patient sits upright, and experiences and manifests the greatest possible dyspnœa,—the shoulders are elevated, all the thorax is in movement, suffocation seems impending, the countenance is sometimes pale, with an expression of alarm,

sometimes red, tumid, and delirious; the anxiety is extreme, and mixed with terror and desperation. In these attacks the pulse is apt to become irregular and intermittent. After the attack the respiration becomes easier, but the pulse frequently remains irregular. Sometimes a fresh attack terminates by fatal suffocation; frequently, however, dissolution takes place unexpectedly in the interval. This affection is, according to M. Bayle, almost constantly fatal; the author has seen but one case, out of seventeen, terminate favourably. In some the first attack is fatal; some have died from the third to the fifth day; and others have survived a month or more, the attacks of suffocation having been, at first, little severe, and having returned after long intervals, as of several days.

On dissection, the borders of the glottis are found swollen, thickened, white, and rugose, and form a projecting margin, distended by a serous fluid which it is difficult to express, even on pressing a part in which several incisions have been made, between the thumb and finger. In the larynx sometimes a slight and diffused œdema is alone observed; sometimes there are reddened spots and injected blood-vessels; sometimes the vocal chords, or the ventricles, or the base of the cricoid cartilage is particularly affected; in some instances there is an abscess in the larynx, and in others caries of the cartilages of this organ. The borders of the epiglottis are frequently swollen.

Although the symptoms of this disease are not particularized by authors, its morbid anatomy is noticed in several works,* quoted by M. Bayle. He does not appear to have been acquainted with the advances made in this country, in the investigation of diseases of the larynx and trachea.

M. Bayle next proceeds to mention the curative measures to be employed in this disease. They are, 1. blood-letting, by the lancet and by leeches; 2. emetics; 3. sinapisms or blisters applied to the neck; 4. antispasmodics; but principally laryngotomy. In this last measure safety alone consists, whilst time is obtained for art or for nature to work a cure.

M. Bayle warns us, that an attack of a similar affection, as far as symptoms go, occasionally occurs, and is removed by "revulsives;" this point will be illustrated in the sequel. He then proceeds to detail some Cases of the morbid affection in question. The first case is one of œdema of the glottis which supervened, without manifest cause, during convalescence from

* Bichat, Anat. Descrip. T. II. pp. 399, 404; Morgagni, Ep. IV. art. 27; XXII, art. 24, 25; XLIV, art. 13.

a putrid bilious fever. The second occurred in a person previously in full health. The third was occasioned by an abscess in the posterior part of the larynx, which supervened to a putrid malignant fever. The fourth case was produced by an abscess in the parietes of the larynx. The fifth was induced by ulcers of the larynx, in a case of phthisis, consequent on a quotidian intermittent fever. The sixth is a case of aneurism of the aorta, which imitated, in its symptoms, the œdema of the glottis. Cases of this affection have been treated by M. M. Laennec, Fizeau, Nysten, Martin, Clarion, Mérat, Cayol, &c. &c.

We now proceed to notice, in a cursory manner, the works of other writers on the diseases of the larynx. We would, however, previously observe, that the medical profession is still in want of a clear, connected, and practical view of this subject, in all its bearings with the diseases,—organic and inorganic,—of the continuous, adjacent, or neighbouring parts—the trachea, the bronchiæ, the fauces, the pharynx, the œsophagus, the aorta, the cellular membrane, the various glands, &c. We understand that this subject has been selected for investigation by a gentleman already well known to the medical public.

Acute inflammation of the larynx, or cynanche laryngea, which appears to be analagous to the affection noticed by M. Bayle, has been amply and admirably treated of by Dr. Baillie *, Dr. Farre †, and other writers. An interesting case of chronic inflammation of this organ, in which an impending fatal suffocation was averted by the operation of laryngotomy, and in which the original disease, of nine months duration, was removed by mercury, has been published by Dr. Marshall Hall ‡. A case of chronic inflammation of the trachea, producing suffocative, dyspnœa, has also yielded to the action of mercury, without the aid of an operation.

Ulcers of the larynx, constituting the phthisie laryngée of the French writers, and especially of Corvisart and Portal, has lately been particularly noticed by Mr. Charles Bell §. We have lately witnessed the course of two cases of this disease. One patient died extremely emaciated, without any apparent disease of the lungs; in the other, the violent coughing induced hæmoptysis, and copious frothy expectoration.

Cases of hysteric affection of the larynx sometimes completely

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* Trans. of a Soc. for the Imp. of Med. Knowledge, Vol. III. p, 275.

† Med. Chir. Trans. Vol. III. pp. 84, 323.

‡ Med. Chir. Trans. Vol. X. p. 166.

§ Reports, Vol. I. p. 21.

imitate those of inflammation of this organ. Mr. Charles Bell * mentions a case of this kind, in which laryngotomy was, for a moment, deemed necessary. We are acquainted with a lady who has had three attacks of this nature. There were the most urgent dyspnœa, with apparently imminent suffocation, croupy inspirations, loss of voice, and delirium; there was also hysteric laughter, by which the nature of the affection was sufficiently indicated. A valuable account of some affections of the larynx, which are attended only or principally by affection of the voice, has been contributed by M. Portal, to whom we must, for the present, refer our readers †. Loss of voice is frequently the effect of cold, and an hysteric affection.

With these views of affections of the larynx should be connected those of the various diseases which resemble them. We have ourselves seen a case of laryngal or tracheal disease imitated by aneurysm of the aorta; and a case of aneurysm of the arteria innominata is mentioned by Mr. Lawrence ‡, which induced similar symptoms. We have already mentioned that detailed by M. Bayle. Diseases and tumours of the adjacent parts may induce, by compressing the different points of the larynx or trachea, the symptoms of an original affection of these organs.

The diseases of the larynx and trachea in infants also demand renewed investigation. We shall, in conclusion, shortly allude to some points requiring further illustration. Croup is sometimes acute, sometimes chronic; sometimes serious and speedily fatal, sometimes transitory; sometimes it induces the formation of a new membrane, sometimes the exudation of much mucus, and sometimes a thickening of the mucus membrane which naturally lines the trachea. These differences, and the corresponding difference of symptoms, still require to be sedulously pointed out. An abscess in the cellular membrane posterior to the trachea, § and, in other cases, in the posterior part of the pharynx, ‖ has induced the symptoms of croup. Affections of the other contiguous parts may also imitate inflammation of the trachea. Lastly, there is an accident, the effects of which produce the symptoms of croup, and which has not, we believe, been noticed by medical writers:—Children have attempted, through mistake, to drink boiling water from the spout of

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* Reports, Vol. I. p. 40.

† Mémoires sur plusieurs Maladies, T. II. p. 109; Anatomie Medicale, T. 4.

‡ Med. Chir. Trans. Vol. VI. p. 227.

§ Hall on Diagnosis, Part II. p. 212.

‖ Abercrombie, Edinb. Med. Journ. Vol. XV. p. 259, and Vol. XVI, p. 156.

a tea kettle, supposing it still to be cold. The effects of this accident are not, as might have been conjectured à priori, the symptoms of inflammation of the œsophagus and stomach, but those of inflammation of the glottis and larynx,—or of croup; and the case constitutes another instance of morbid affection, in which laryngotomy may be required to prevent impending suffocation. The particulars of some cases of this accident will be given in another place.

It is our intention to resume, ere long, the subject of diseases of the larynx, and to treat it at considerable length. The present sketch will, in the mean time, we trust, be read with some interest.

ART. III. Κλαυδιοῦ Γαληνοῦ περι αριςης διδασκαλιας.

Claudii Galeni de optimo docendi Genere Libellus. Novæ Medicorum Græcorum omnium editionis Specimen exhibuit D. Carolus Gottlob Kühn, Profess. Chirurg. Publ. Ord. et Variarum Societatum Eruditarum Memb. &c. 8vo. Lipsiæ, 1818,

A CORRECT and uniform edition of the Greek medical authors has been long a desideratum, and if properly executed would tend much to revive the study of these writers in England. It is with great pleasure then that we announce to our readers that Dr. Kühn, of Leipsic, has undertaken this task, and the present little work is a specimen of the manner in which he proposes to execute it. As far as we are capable of judging, it is extremely satisfactory, though he has not perhaps chosen the most popular part of Galen, from whose writings the specimen before us is given.

Having communicated his intention of publishing a series of the Greek medical authors, he was induced, by the approbation of several learned men, to commence his undertaking sooner than he had intended, and their opinion coincided with his own wishes in beginning with Galen.

" Quod dudum animo suscepi et nuper publice edisserui consilium edendorum a me græcorum medicorum, qui diutius quamper erat, inculti et quasi derelicti latuerunt, id vehementer laetor a multis viris eruditis, iisque harum rerum peritissimis arbitris, non fuisse solum omnino probatum, sed separatim quoque ideo laudatum, quod Galenum, quamvis verborum ubertate, seu potius luxurie sæpius molestum scriptorem, tamen exquisita eruditione insignem, atque omnis theoriæ me-

dicæ, de rebus imprimis ad pathologiam pertinentibus, et terminologiæ, etiamnunc a medicis usurpatæ, præcipuum auctorem, ducendæ medicorum græcorum pompæ principem esse voluerim."

Among his supporters, Dr. Kühn mentions many of the most eminent physicians in Germany, and their exertions have insured the sale of 200 copies. He does not, however, feel justified in commencing such an expensive work, unless he can depend on the sale of at least 400. It will therefore rest with the liberality of the profession whether he proceed in it or not.

Dr. Kühn solicits the assistance of the learned in another point of view—

"Sed alia quoque ratione labor, quem græcis medicis dicavi, maximopere juvari potest. Latent enim in bibliothecis, quarum adeundarum copia mihi nulla est, codices manuscripti Hippocratis, Galeni, reliquorumque medicorum, quos cum editis exemplis conferrem lubentissime, si eos aliquamdiu oculis et manibus usurpare mihi liceret. Quod in paucissimis tantum facere potui, qui in bibliothecis regia Dresdeni et academiæ senatusque Lipsiensis adservantur. Rogatos igitur cupio etiam atque etiam omnes viros doctos, qui thesauris bibliothecarum manuscriptis codicibus ditissimarnm præsunt, ut eos, iis saltem in locis, inspiciant, quæ in editionibus vulgatis lacunis amplis fœdata reperiuntur. Sic, ut his utar exemplis, e Galeno desumtis, in fine libelli, ὅτι τὰ τῆς ψυχῆς ἤθη ταῖς τοῦ σώματος κράσεσι ἕπεται, laceratus miserè locus reperitur, quem tamen codex Reinesii, qui e bibliotheca Schroeterorum Jenensium ad ipsum pervenerat, pleniorem habet una cum aliis, (vid. Ej. *epist. ad* Cp. Hofmann. *et* Rupert. p. 522.) v. c. cod. CIX. bibliothecæ reg. Bavar. unde Ign. Hardtius (cons. *Catal. codd. mstor. bibl. reg. Bav.* Vol. II. p. 14.) quædam cum lectoribus communicavit, quibus desiderium totius loci in nobis magis incensum, quam exstinctum esse dolemus. Utinam mihi contingat, ut experiar eandem illustrium bibliothecæ Monacensis curatorum liberalitatem, cujus memoriam olim collegæ mei justa laude celebrarunt, neque hodie deposuerunt, quippe quibus codicum antiquorum, tum Augustæ Vindelicorum, nunc Monachii adservatorum, tam expeditus usus concederetur, ut libri scripti, quibus egerent, haud gravate huc mitterentur, quo commodius eos cum impressis conferre possent.—Porro in præclari operis περὶ τῶν ἐν ἀνθρώπου σώματι μορίων libro VII. post caput octavum sex desunt capita, quæ in latina tantum leguntnr editione. Initium περὶ εὐπορίστων deest, uti in libello περὶ πτισσάνης multæ versus finem lacunæ occnrrunt. Quam misere dilaceratus commentarius de libris, quos Galenus composuit, ad nos pervenerit, neminem latere potest, qui vel fugitivis oculis illius opera pervolverit. Cum autem in illo commentario multa ad vitam Galeni, ad historiam librorum suorum et inprimis ad genuinos a suppositis distinguendos facientia occurrant, optandum est, ut omnes bibliothecarum anguli excutiantur. si forte alicubi inveniantur codices integriores, quibus illæ lacunæ suppleri et la-

cera Galeni membra apte componi et feliciter sanari possint. Totius commentarii de vocalium instrumentorum dissectione non nisi latina versio typis excusa est Lugduni 1556. 8., quæ infelix sors et commentariis IV de iis accidit, quæ in Platonis Timæo de rebus medicis dicta sunt, de caussis procatarcticis, de attenuante victus ratione, de musculorum dissectione, etc. Nec integrum ad nos pervenit, certe in editionibus omnibus mutilum deprehenditur opus præclarum de anatomicis administrationibus, cujus libri aoni pars ea, qua Galenus de spinalis medullæ dissectione exposuit, et sex postremi libri periere toti. Magna quoque lacuna versus finem libri tertii reperiebatur in codice manuscripto, quem typis exscribendum curavit editor Basileensis, quæ, cum operæ adhuc in excudendo libro desudarent, ex alio codice fuit suppleta). Nuper per literas, humanitate plenissimas, me certiorem fecit Generos. Eques de Mercy, medicinæ græcæ apud Parisinos professor publicus, Bosquillonium haud exiguam operam collocasse in hisce lacunis explendis et operibus Galeni a mendis quam plurimis purgandis. Sed in quas manus post viri hujus græce doctissimi obitum pervenerint lucubrationes istæ, ignoro. Optandum autem est, ut ab interitu vindicatæ mox publicentur."

Our Author does not neglect the opportunity of paying a just tribute of respect to many of his countrymen, who are now cultivating Greek medical literature. The first he mentions is the illustrious Weigel, who practices medicine at Dresden. This learned physician has devoted many years to the study of Hippocrates, Aretæus, and Aetius; and has visited most of the Italian and other libraries, for the purpose of comparing the published works of these authors with the MS. ascribed to them. He is now just returned again from Italy, and is preparing for publication some medical fragments of Aelius Promotus περὶ ἰοβόλων καὶ δηλητηρίων, of Alexander Aphrodis, περὶ πυρετῶν, of Paulus Nicaeus βιβλίον ἰατρικὸν, the unpublished problems of Cassius, "aliqae battis tineisque crepta," under the general title of Anecdoti Græcorum. Dr. Kühn has derived great assistance from the friendship of this learned author; also from Strueve, from Burdach, and from Harless, clinical professor at Bonn.

Our author then proceeds to announce the style and manner in which his elegant edition is to be executed. He is particularly desirous that it should be printed in such a form and size as may adapt it to common use, and that the text should be correct; hoping that it will induce those who are qualified by their learning and talents to illustrate, and perhaps amend, the disputed passages. He expresses another wish, which we fear will be more difficult of accomplishment.

"Præterea aliud quoque mihi fuit propositum, quod si hac editione medicorum græcorum adsecutus fuero, felicem me prædicabo. Nam

perpendenti mihi non sine gravi animi dolore, quanta cum arrogantia multi nostræ ætatis medici vanarum hypothesium suarum specie delectentur, et alto supercilio contemnant non solum æquales suos, sed veteres etiam artis suæ auctores, quorum ne orationem quidem intelligunt, nedum ut Hippocratis, Aretæi, Galeni aliorumque, quos naturæ diligentissimos scrutatores et fidissimos observatores perpetua veneratione prosequendos censemus, sapientiam agnoscere velint: tam parum mirum videtur, cur medici a naturæ tramite, quem Hippocrates ὁδηγὸς, et qui ejus exemplum imitati sunt, felicissime sunt persecuti, deflectentes, in tot errores præcipitentur, ut id unice mirer, qui fiat, ut omnino aliquid videant. Quos quidem errores ut medici juniores intuendo illustrium exemplorum documenta, imitatione dignissima, mature vitare discant, hac ipsa medicorum græcorum editione efficere studui."

In the correction of typographical errors he will be assisted by the learned Schaefer.

As to his commentary; anxious to make the book of as convenient size and moderate price as possible, Dr. Kühn has avoided loading it with multiplied and verbose criticisms. He has been careful, however, to collect the substance of the conjectures, criticisms, and emendations of the learned who have preceded him, and to give them concisely and correctly. The student will find the various readings of the Basil, Paris, Aldine, and Goulstonian editions—of the MS. collected by T. Goulston, and the corrections of the Aldine edition by Cornarius; and also those in MS. by Scaliger, preserved in the Guelphic Library at Brunswick. He concludes his preface in C. Hoffman's words, when about to publish an edition of Galen:—

"Cupio rogatum," scribebat, "omnes bonos cordatosque, ut, si quæ habeant Galeni scripta, sive nunquam edita, sive edita seorsim, sive cum, sive sine emendationibus, qua græcæ, qua latinæ orationis, ad me mittant, certi, de hoc ipsorum facto publice olim constiturum. Si qui etiam sint, in quorum manibus inveniantur correctiones nondum editæ Vesalii, Dodonæi, Cornarii, Lalamantii, Gregorii, Budæi, Riccii, Falckenburgii (addo Petri Laurembergii), Reinesii, Ed. Bernardi, Trilleri, Reiskii, Bosquillonii, Corayi, aliorum); imo vero, si qui emendationes habeant ex collatione mss. in germanicis, italicis, gallicis, hispanicis, anglicis bibliothecis reconditorum eos pariter rogo et obsecro, ut mecum communicent, certi, unicuique sua sine livore tributum iri. Hoc spondeo fide mea."

Our author concludes by giving the five first chapters of Galen de optimo docendi genere. The Greek is of modern cut, and beautifully printed in small pica, with Cornarius's Latin version on the opposite side. The notes are concise, and display great learning and talent.

Art. III. *Wesen und Heilung der Epilepsie von D. Eduard Löbenstein-Löbel, Professor ordinarius honorarius der Medicin, &c. &c.* 8vo. Leipzig, 1818.

On the Nature and Cure of Epilepsy. By Dr. E. Löbenstein-Löbel, &c.

There are few diseases, the nature of which is involved in greater obscurity than that of epilepsy, and yet it has been known and observed from the earliest periods. We had hoped that the same acute and learned pathologist who has so ably investigated the subject of apoplexy, we allude to Dr. Abercrombie of Edinburgh, would have extended his researches to epilepsy; and we trust, that it may yet engage his attention. We regret that in the present article we shall not be able to communicate any thing that is absolutely new, or much that is interesting. The work of Dr. Löbenstein-Löbel is a mere detail of what is already known on the subject, and of 356 pages, 38 only are devoted to the nature, causes, form, course, prognosis, diagnosis, and appearances on dissection; the rest are occupied with an enumeration of the means of cure. We shall confine ourselves to a very brief analysis of the work.

The different appellations by which epilepsy has been known are almost as various as the authors who have written upon it. Hippocrates * calls it a holy disease, viewing it as sent from the Gods. Aretæus † says, "Sed et ignominiosum quoque hoc est morbi genus; homines quippe existimant, hunc iis qui in lunam deliquerint, immitti: quapropter sacer etiam morbus dicitur; quod autem nomen aliis de causis indi potuit vel ob mali magnitudinem, sacrum enim idem, quod magnum, significat; vel propterea, quod non humana, sed divina tantum ope hunc curari posse creditum est; vel quia Deus aliquis in hominem ingressus est putetur vel fortasse horum simul omnium causa morbus sacer appellatus est. Aristotle ‡ applies to epilepsy the term of Herculean, supposing Hercules to have laboured under it. Galen § also calls it Herculean, from the magnitude and importance of the disease, and the difficulty of curing it. Matthew, ‖ Mark, ** and Luke, †† call epileptic

* De morbo sacro. Cap. 1. Chart. Tom. X. p. 475.

† De causis et sign. morb. Lib. 1. Cap. 4. p. 28.

‡ Problem. Sect. xxx. Quaest. 1. Tom. IV. p. 227.

§ Comm. in Lib. vi. Epidem. Chart. Tom. IX. p. 550.

‖ Chapt. iv. vers. 24. Chap. xvii. vers. 15.

** Chapt. ix. vers. 18. and following.

†† Chapt. ix. vers. 39. and following.

lunatics, because they are often seized in the night, and at the time of the full moon. Aulus Gellius * gives it the appellation of *morbus sonticus*, from its dreadful character and appearance. By several of the antient authors, Hippocrates † included, it is called morbus puerilis, from its more frequent occurrence in early life.

Aeginet ‡ and Serenus § named it morbus comitialis. Seneca ‖ called it vitium comitiale, and properly, as observed by Ant. Hoffman, "Ideo quod in frequenti hominum conventu morbo hoc infestati visi sint epileptici, seu quod comitia abrumperentur, si quis epilepsia corriperetur. The term epilepsy is derived from ἐπιλαμβάνω, signifying to attack suddenly.

Our author does not detail the various opinions which have been entertained respecting the proximate cause of epilepsy. He developes his own ideas on the subject at great length. These we decline giving to our readers, as we confess we do not understand them. He divides epilepsy into the idiopathic and sympathetic forms. The seat of the former he places in the brain and nervous system, and makes use of Rieverius's words to express its characteristic and diagnostic features. "A sympathetica distinguitur, quod in idiopatica multa apparent cerebri affecti indicia, mentis torpor vel tarditas memoriæ imminutio; insomnia turbulenta, sensuum hebetudo, corporis gravitas et segnities, capitis dolor aliaeque præterea æger venientem paroxysmum non percipit, sed ab eo incautus subito opprimitur, dum paroxysmus in coitu solis et lunæ, ut plurimum contingit."

Smpathetic epilepsy, according to our author, always arises from injury or irregularities of action in any organ, producing a secondary disturbance of the brain and nervous system; hence the division of epilepsy, adopted by many authors, into cerebral and abdominal epilepsy.

Observation and experience have established another division, into the acute and chronic. The acute epilepsy frequently accompanies the cutting of the teeth, and the eruption of exanthemata; it frequently results from exertions of the mind or passions; from rage, anger, or venereal excesses. The acute epilepsy either destroys the victim of its attack by convulsions, or terminates with the disease it accompanied. The chronic

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* Noct. Attic. Lib. xx. Cap. 1.

† De Aëre loc. et aqua. Text. ii. Chart. Tom. VII. p. 190.

‡ Libr. iii. Cap. xiii. p. 29. versa.

§ Q. Seren. Sammon. p. 162.

‖ De Ira. iii. 7.

form of epilepsy, on the contrary, returns again, and often lasts months and years.

In regard to the type of epilepsy, the disease may either be *epilepsia atypica, erratica,* or periodical *epilepsia typica, periodica.* This last form of epilepsy is observed in the febris intermittens epileptica.* In women, it often makes its appearance with the menses, and accompanies them at each succeeding period. The best description of this part of our subject is to be met with in a highly interesting work of Professor Osianders on the diseases of puberty. "The attacks generally appear in the evening, and increase in proportion to the approach of the menses. The previous symptoms are generally langour, a gloomy tone of mind, and inclination to weep; these terminate in continued convulsions of the limbs, difficulty of breathing, loss of consciousness, and profuse sweating. Sometimes, but not always, there is inversion of the thumbs and foaming at the mouth. By these forewarnings of headache and languor, the patients are reminded to lie down, and then the attack is neither so violent or dreadful as when it seizes the patient unprepared and unaware. If there be a very lively disposition of mind and great restlessness of the body, as inclination to dance, laugh, kick, &c. the paroxysm is then generally stronger, and the menses under such circumstances are generally attended with great pain of the abdomen, &c." †

Dr. Löbenstein-Löbel does not enlarge upon the hereditary disposition of epilepsy, but merely refers to the authors who have treated the subject; they are Hoffman, ‡ Stahl, § Louis, ‖ Jacob Wolff, ** and Rougemont. †† Our author gives a case which came under his own immediate observation, in which two children of an epileptic parent were attacked by the disease at the period of puberty. No medicine was used, and the com-

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* Vide Sauvages Nosolog. Method. Tom. II. Part ii. p. 97.

† Fr. Beng. Osiander über die Entwicklungskrankheiten in den Blüthenjahren des weiblichen Geschlechts, I Theil. S. 57, 58. Göttingen, 1817.

‡ Frid. Hoffman Diss. de adfectibus haereditariis eorumque origine. Hal. 1699. (App. Suppl. II. I. p. 523.)

§ G. Ernesti Stahl Diss. haereditaria dispositione ad varios adfectus. Halæ, 1706, 4to.

‖ Comment se fait la transmission des maladies héréditaires, par M. Louis, Paris, 1749.

** Joh. Jacob Wolf Diss. de morbis hereditariis. Basileæ, 1755.

†† Abhandlung über die erblichen Krankheiten. Eine gekrönte Preisschrift, von J. Claud, Bougemont, übersetzt von F. E. Wegeler. Frankfort, 1794. 8vo.

plaint gradually disappeared—in the one case, at the 20th, and in the other, at the 25th year.

Dissection.—The most careful dissection of epileptics often fails to show any cause of disease. This we should attribute to our imperfect knowledge of pathological and physiological anatomy. Dr. Löbenstein-Löbel, however, gives a very singular reason, and leads us to infer, that whenever such cases occur, it is owing to injudicious treatment on the part of the practitioner, or neglect of the patient, the disease no longer affecting a particular part, but extending to the whole nervous system, and thus becoming habitual.

Morgagni, but more particularly Wenzel * and Greding,† have observed a great thickening of the bones of the cranium, and in one individual found them nine inches thick. The following forms of organic disease have also been observed:—Swelled glands on the dura mater, separation of the sutures, bony matter deposited, ossification of the processes of the dura mater, adhesions of the dura and pia mater. A varicose state of the vessels, and polypous masses in them, are also mentioned; (compare F. Hoffmann and Bonnet,) hydatids in the tunica arachnoidea, and depositions of lymph and blood between the brain and its coverings.

The brain itself has been found adhering to its membranes, and bloody, purulent, and ichorous matter contained in its ventricles; in a few rare cases the dissection of epileptics has discovered an alteration in the structure of the brain, it being preternaturally firm or remarkably soft, brittle, and of a pulpy consistence.

Besides the head, morbid alterations of structure have been found in other parts of the body, which appear to be connected with the attack of epilepsy; thus Cappel observed, a case in which a tumours had pressed on the nerves of the voice. Other inquirers have found indurations and tumours in the pancreas, pressing on the nerves of the extremities. Dr. Löbenstein-Löbel mentions the case of an epileptic woman he saw, in whom a hard large tumour was found on the cervix of the uterus. This had swelled the abdomen very much during life: it arose from a blow which she received from the butt end of a musket some years before. She was subject to epileptic fits from the same period.

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* Joh. Wenzel's Beobacht über den Hernanhang fallsüchtiger Personen, nach seinem Tode herausgegeben von K. Wenzel. Mainz, 1810, 8vo. mit Kupfern.

† Greding in Ludwingii Adversar. Med. Pract. Vol II. p. 449.

Causes of Epilepsy.—All that affects the brain and nervous system directly or indirectly, may, under certain circumstances, give rise to epilepsy; but those individuals are more peculiarly predisposed to it in whom prevailing irritability of the nervous system is combined with a very delicate frame of body, or where such a frame of body is induced by disease. Hence the frequent occurrences of epilepsy after immoderate bleeding, or loss of blood. It more frequently occurs in women than in men, and in youth oftener than in manhood. It descends from parents to children. The passions, such as rage, joy, fright, appear to have great effect in producing it. Acute exanthemata may also induce it, and venereal excesses and onanism are a more frequent cause than is generally suspected. On the other hand, refraining from sexual intercourse, in a person accustomed to it, has been mentioned as giving rise to it. Great mental exertion as a cause, is observed as early as the days of Galen, who gives us a case of a grammarian who was attacked with the disease after intense application to study. Hoffman tells us that Franciscus Petrarca brought on epilepsy by intense study and poetry.

Organic diseases of the brain, such as tumours, &c. of course are among the frequent causes of epilepsy, but we suspect that sometimes the effect is mistaken for the cause, and that extravasations of blood and distention of the vessels are oftener to be viewed as induced by epilepsy, than as producing it; worms in children often induce it; and our author refers to a case given by Rheineck,* of a woman twenty-four years of age, who laboured for twenty-five years under epilepsy, which was kept up by a tape worm, the presence of which was not suspected, because it gave rise to no particular symptoms characteristic of worms. By the use of the usual worm medicines, the complaint was removed.

Our author divides a fit of epilepsy into three distinct stages or periods: 1st. The stage of forewarning; 2d. The convulsive stage; 3d. The soporose stage. Previous to the invasion of the first stage, the urine is generally observed to be clear as water, and somewhat frothy on the surface, and Dr. Löbenstein Löbel confirms from experience the remark of Dr. Low.† "By

* Rheineck Neuestes Journal für die Chirurgie, Arzeneykunde und Geburtshülfe von C. L. Mursinna, 1 Band, 2 Stück. Berlin, 1817.

† Ueber den urin als diagnostisches und prognostisches Zeichen in physiologischer und pathologischer Hensicht, u. s. w. von D. Low Landshut, 1808. Eine gekrönte Preisschrift, S. 159.

a similar pale, watery, spastic urine, the copious discharge of which is combined with shivering, the attacks of epilepsy, chorea, tetanus and trismus, are announced. These belong to the second form of primary nervous diseases, in which the influence of the nerves upon the muscular system and organs derived from the base of the brain begins to cease, and the nervous and muscular system are thus placed in active opposition. Hence the urine and semen are often ejected with force in epilepsy." The first stage warns us of the coming disease by a peculiar anxious sensibility in the head. The patient complains of prepossession of the impending disease, of giddiness and emptiness of the head, accompanied with deafness, shivering of the limbs, anxious deportment, restlessness, distressing dreams, starting in sleep, morbid action of the external senses, such as seeing flames and sparks, a red and black colour dancing before the eyes, a double vision, tears in the eyes, humming in the ears, and even the sense and smell is disordered. The patient's look is anxious, squinting, and sometimes fixed; the pupil is alternately contracted and dilated, and the iris has often been observed at this period trembling. The speech begins to falter, and the patient is disposed to be irritable, peevish, and quick in taking offence; involuntary yawns, alternating with the expression of great anxiety, cramp in the stomach, a drawing in the extremities, and palpitation of the heart succeed. Voracious appetite and great discharge of saliva, a watery and offensive urine, and occasionally also violent sneezing have been observed. Now succeed convulsions in particular muscles, a desire for motion, and distortion of the countenance, with the invasion of the aura epileptica. This is characterized either by a warm or more generally a cold wind, or a creeping like ants over the body, or by a simultaneous electrical shock at the extremities, rising from the back to the stomach and head. As soon as this indescribable sensation has reached the head, the patient immediately loses all consciousness, and epilepsy is fully declared. Here it may be remarked, that many have supposed that the cause of the disease might always be founded at the spot where this sensation was first experienced—a supposition in many cases clearly contradicted by appearances of organic disease being found in the brain after death: it must rather be referred to nervous sympathy.

In some cases nearly all the above symptoms may be observed in the same patient; in the greater number of cases however, only some of them are present.

The second or convulsive stage.—The patient generally runs some steps forward, utters a fearful cry, or turns in a circle, and

then falls on the ground. The loss of sensibility and consciousness is so great that the patient is insensible to the strongest stimulants. The head is generally drawn to one side, convulsive twitches of the muscles of the face and extremities appear, which soon degenerate into universal convulsions. The eyes roll wildly round, the eyelids are spasmodically drawn together and motionless; the eye itself appears ready to start out, and is at the same time fixed as if it were lifeless. In full-blooded muscular individuals the iris is more contracted than in weak and delicate individuals, in whom it is generally dilated, as is likewise the pupil. The spasmus cynicus now appears, and the muscles of the forehead wrinkle with trismus, gnashing of the teeth, and foaming of the mouth. The respiration is quick and short, resembling snoring, painful and rattling. The patient sometimes screams, but generally moans piteously. Aretæus has described this state very accurately:—"Malæ rubent quidem, in augmento autem mali et faciei livor accedit, cervicis vasa distenduntur, vox ut in strangulatu aufertur; etiamsi vehementer inclames, non sentiunt, eorum vox nil nisi gemitus et suspirium est, et respiratio et suffocatio, veluti in iis, qui laqueo suffocantur." The tongue is either protruded or jammed between the teeth. By the force of the convulsions the jawbone is often dislocated, and teeth are broken out. The thumbs are driven in. It is impossible to pour any thing down the patient's throat, or a violent hiccough prevails. Trismus appears, and other convulsive forms, such as tetanus, emprosthotonus, opisthotonous, and pleurothotonous. This state may continue for minutes, or last for hours; and during the paroxysm the vessels of the head are much swelled, the carotids pulsate strongly, and there is general congestion. The pulse varies; it is generally contracted small, and hardly perceptible. Erections of the penis and seminal emissions also accompany this period. The testicles are drawn towards the abdominal ring. At the end of this period the fæces and urine are involuntarily discharged; these are peculiarly fetid. Vomiting sometimes appears, the convulsive twitches in the face and extremities diminish, and a deep sigh often closes this stage.

The third or soporose state is characterized by want of consciousness and sense. The patient falls into a deep and often snoring sleep, during which a copious sweat, particularly profuse the neck, head and breast, breaks out, and lasts often for an hour. The pulse now becomes fuller and softer, the respiration more free and easier, and the convulsive twitches totally disappear. The patient wakes, as from a deep sleep, and views all who surround him with astonishment. By degrees perfect conscious-

ness returns; the patient is, however, still wearied, stunned, sleepy, and exhausted, and often complains of violent headache and pain in the neck. In this state the eye is somewhat fixed, squinting and dull, the pupil rather enlarged. The patient cannot remember any thing which has passed. The speech still faulters. These symptoms gradually disappear, but a great weakness and a disinclination to exertion remain.

An epileptic paroxysm generally lasts from a quarter to half an hour, but when the disease becomes chronic the attacks are longer. The return of the paroxysm depends on circumstances, and cannot therefore with certainty be calculated upon. It may recur several times in the same day, or may not re-appear at all, particularly when there has been an obvious cause, as loaded stomach, &c. Our author gives the case of an apprentice to a currier, who having eaten heartily of dumplings, and drank a large quantity of brandy, was seized with a succession of epileptic paroxysms during the day, but which disappeared after taking an emetic, and did not return. Cases have been seen in which the fit returned every month, or week, or only once in the year. If, however, the paroxysms frequently return, or if epilepsy appears after puberty, and lasts several years, it affects the brain and nervous system so completely that the mind becomes dull, and habitual stupor seizes the patient, succeeded by different secondary morbid affections of the nervous system, irregular muscular action, mania, deafness and blindness, melancholy, loss of speech, paralysis and apoplexy. The duration of the disease depends upon positive and negative circumstances. Chronic epilepsy may last the whole life. A favourable termination is indicated by the fits diminishing in violence, and a longer period elapsing between the paroxysms. Where death terminates the scene, it is generally by suffocation or apoplexy, and is accompanied with most fearful symptoms.

Our author commences his account of the treatment of epilepsy by pointing out the necessity of attending in the first instance to the remote causes which may be supposed to have produced the disease; of tracing step by step the effect of these causes on the system from their earliest appearance to the period of attack, and of observing what particular organ or organs were earliest affected. The nature and particular habits of constitution of the patient must not be forgotten. It is of the greatest consequence to distinguish the cause of epilepsy, from its effects, and carefully to separate the symptoms which occur, after the invasion of the complaint from those which preceded it. After these introductory remarks, Dr. Löbenstein-

Löbel treats of the cure of epilepsy under the following heads: 1. Treatment during the epileptic attack. 2. Cases requiring the cold affusion. 3. Cases requiring lukewarm affusion. 4. Counter indications to the cold and warm affusion. 5. The method and time of applying the affusion. 6. Cure of idiopathic epilepsy in childhood. 7. Directions for the administration of medicines. 8. Cure of sympathetic epilepsy in childhood. 9. Treatment of epilepsy connected with teething. 10. Regimen. 11. Epilepsy from worms. 12. Epilepsy in manhood. 13. Cure of idiopathic epilepsy in grown up individuals, in whom there is a preponderance of irritability and superabundance of blood. 14. Cure of idiopathic epilepsy in individuals, where there is a preponderance of the vegetative system. 15. Cure of epilepsy with a preponderance of sensibility. 16. Diet. 17. Symptomatic epilepsy in adults. Then follow thirty-eight chapters, each of which is occupied with the description of some particular medicine or remedy.

The cold affusion is indicated in the cases of strong muscular robust men, in whom the pulse during the intervals of attack beats full and regularly; where the appetite and digestion are good, and the sleep natural; where the disease has not been long established; and where individuals are disposed to apoplexy. Also in cases in which, during the convulsive part of the attack, there is great congestion in the head, much redness of the countenance, and strong pulsation of the carotids, where the soporose stage comes on with great stunning, and lasts long, without a total abatement of the convulsions, and is accompanied with bleeding from the mouth and nose. The employment of the cold affusion is to be preceded by blood-letting.

In cachectic subjects, where congestion is a symptom, the cold affusion is recommended, but it must be employed with more caution. Bleeding is not admissible here; our author stating, that where it was employed the disease returned more frequently. Great attention must always be paid to the state of the bowels. Dr. Löbenstein-Löbel is very minute in describing the modifications under which the cold affusion is to be employed. He remarks, that in those cases which have arisen from onany, not only the head but parts of generation should be affused with cold water, and this practice he had found particularly useful.

The cold affusion to the head is also indicated in those of a torpid nature, where the disease has continued long. Our author sums up his remarks by stating, that he has found it equally salutary in the idiopathic and sympathetic epilepsy. He however objects to plunging the patient in a cold bath; and observes, that however recommended by some, he has known one

case where it caused death, and in another total loss of speech. The practitioner is desired not to desist from the employment of the cold affusion, because the patient complains of exhaustion and weakness in the limbs. On the contrary, we may conclude with tolerable certainty, that the third and fourth attack of epilepsy will not return, if during the second application of the cold affusion the patient feels, during the paroxysm, as if it descended from a high tower or house; and where this is accompanied with a gradual diminution of the other symptoms.

Cases in which the cold affusion is improper:—1. Where there is great weakness of mind, and palsy of particular limbs:—2. Where, during the intervals, the patient complains of shivering, or is subject to diarrhœa, gout or catarrh:—3. Where the congestion in the head is not great:—4. Where, in the intermissions, there is much trembling of the limbs, great anxiety of countenance, a stammering or hesitation of speech:—5. Chronic eruptions:—6. Hereditary epilepsy, where the constitution is not plethoric, and there is not much heat of the head:—7. The period of menstruation:—8. Profuse sweat on the head:—9. When epilepsy occurs during sleep, or at night:—10. When epilepsy appears at the period of puberty, the cold affusion is improper at the commencement of the disease:—11. Rheumatism and gout.—12. Repelled eruptions, both acute and chronic:—13. In cases of scrophula, rickets, and atrophy of childhood, it is decidedly improper:—14. This method must not be pursued wherever there is great fright and apprehension of it. Dr. Löbenstein-Löbel once saw dreadful convulsions and death follow the employment of the cold affusion, in the case of a boy eight years old, where the physician ridiculed the fear and anxiety which the child testified for it. Lastly, this method is useless in determined organic disease.

Cure of epilepsy in childhood.—Our author traces the appearance of convulsions from the earliest periods. From the connection of the fœtus with the system of the mother, all that acts injuriously upon the latter will affect the former. Our author remarks in illustration of this, that where great fright or anger have affected the mother during her pregnancy, the child often fell a victim to convulsions immediately after birth. In these cases our author always found a morbid oscillation of the nervous system, with debility, and an irregular, small, hardly perceptible pulse. In such cases he has been accustomed to employ with success the careful administration of musk alternately with the sal tart. in the following form:—

℞ Mosch. orient. gr. ¼—gr. ss.
Sacch. alb. ʒs.

℞ Sal. tart. gr. iis—vs.
Aq. cort. aur. ℥ss—℥s.
The powder and a tea spoonful of the mixture to be given alternately every hour.

With this plan were combined the use of the warm bath, and the occasional administration of glysters. The author observes, that injections must be used with great caution, as their indiscriminate employment in young children is apt to induce flatulence and great weakness of the intestines. An appropriate diet and regimen on the part of the mother or nurse, is of course a necessary part of the cure. Dr. Löbenstein-Löbel tells us, that in this form of epilepsy musk is a specific.

When epilepsy attacks children in their fourth, fifth, sixth, or ninth year, more than ordinary attention must be paid to trace the causes which have produced it. If idiopathic epilepsy have appeared after fright, and it assume the acute character; if the subjects of its invasion be thin, weak, debilitated, without much congestion in the head, our author recommends the affusion of lukewarm vinegar and water to the head, and the application of blisters upon the limbs and body, together with the internal use of musk. If the disease have the appearance of passing into the chronic form, we are then directed to use flowers of zinc and Peruvian bark with camphor internally; and externally to rub the back and feet with some stimulant embrocation, continuing always the application of the lukewarm affusion of vinegar and water. If the epileptic attacks return, and the child be irritable, anxious and fretful, if his sleep be disturbed and restless, valerian is useful. An emetic administered when the patient has a forewarning of the fit, proves in many cases very beneficial.

We have no intention of following our author through all the minute directions which he gives at great length for the treatment of epilepsy in childhood. We shall content ourselves with extracting a case which he gives, merely that our readers may form some idea of the German practice. A boy aged seven, was exposed to cold, by which a tinea capitis, to which he was subject, quickly disappeared. Soon after which he was attacked with convulsions, at first transitory, but which soon degenerated into a regular attack of epilepsy, which returned every three or five days without forewarning, and which had lasted a year, when Dr. Löbenstein-Löbel first saw him. The boy was restless and irritable; the countenance pale, the tongue loaded, sleep disturbed, and the appetite bad. The pulse was slow and small, and the extremities felt cold. The child was weakly and melancholy. During the intermissions, he complained of otalgia, and suffered occasional violent headache on change of

weather. An emetic of ipecacuanha was immediately prescribed, which had a decided good effect in weakening the fit, which occurred the following day. The following medicine was then prescribed:

℞ Tinct. cort. aurantii ʒij
Ol. valer. gutt. vi.
Five or ten drops every three hours on sugar.
℞ Emuls. pap. alb. ʒij.
G. arab. iss.
Camph. elect. gr. ij.—gr. iv.
Half a table spoonful to be taken alternately with the former medicine.

At the same time blisters were applied to the calves of both legs. The paroxysm which succeeded the use of these remedies shewed their good effect, for it was very trifling, and did not last more than ten minutes. The boy had no farther attack for nine days; at the expiration of that period, it returned, but the child preserved his consciousness, and the attack was more like the shivering which precedes fever. The camphor emulsion was now discontinued, and the following substituted:

℞ Extract. cort. aurant. ʒi.
Solve in aq. cort. aur. ʒij.
Tinct. Mosch. compos. gr. iij.—gr. v.
A tea spoonful to be taken every three hours.

The patient was likewise every third day put in a warm bath, in which mustard had been dissolved. The disease soon disappeared and did not return.

Our author gives a very good account of epilepsy as connected with the first appearances of puberty, and describes at great length the modifications of the disease induced by disordered menstruation. There is one species of epilepsy to which he considers that sufficient attention has not been paid; that is, the form which occurs on the cessation of the menses. These patients suffer from general debility, profuse perspiration, nausea, a sensation of cold at the back, as if ants were creeping along it; the urine is clear, the pulse small and contracted, the extremities are cold, and they experience a sensation of contraction in the abdomen. These symptoms of marasmus are succeeded by spasms of various descriptions, but which terminate at length in decided epilepsy. With regard to the method of cure, our author states, that if called before the epileptic attacks had commenced, he generally overcame the other symptoms by bark, aromatic embrocations to the back and

abdomen, the use of lukewarm aromatic baths, and a nourishing light diet. When the disease was arrived at epilepsy, the only medicine used was the tincture of nux vomica; and in Löbenstein-Löbel's experience it was always successful. He speaks of it, indeed, in these cases as being an absolute specific. He begins with 16 drops every three hours, and increases it gradually to 25, and even 40.

Thirty-seven chapters of this work are occupied with a description of various supposed specifics, and our author gravely discusses their respective claims. We dare not trespass on our reader's patience, for the time that would be necessary to follow him in his investigation. We shall therefore conclude with, and that very briefly, our opinion of the author's merits.

Dr. Löbenstein-Löbel's work displays great learning, assiduity, and research; but it is defective in that happy combination, and in that lucid arrangement, which distinguish the writings of great pathologists. It may furnish materials for a complete treatise on epilepsy, but it can never be considered as such; instead of giving a clear comprehensive view of epilepsy and its varieties, illustrated by cases, the principal part of the work is occupied with an unconnected account of remedies, useless and forgotten. Let us not be deceived: it is not enough to collect all that has been said, done, or thought on a subject—it requires skill, talent, and discrimination, to choose what bears on the subject, and reject that which is irrelevant.

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ART. IV. *Medical Letters from Paris.*—From the Revue Médicale Historique et Philosophique. No. II.*

[N°. I.]

PARIS has long given the ton to Europe, and so completely dictates to the provinces, that whatever comes from the capital

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* The following letter, which we extract from a most respectable French Journal, will put our readers in possession of all the medical chit-chat of Paris. It is written with great spirit, and contains much truth, and no little malice. We have suppressed many parts of it which were uninteresting, but we have added nothing.

excites the greatest curiosity ; a feeling the more predominent in medical men, from its having been as yet, with regard to them, less gratified. The daily papers detail only events of general interest, and the scientific journals exclude all anecdote. To fill such a gap will be a difficult enterprise, and the execution of it will offend many; but the consideration that science and the public will gain by it, is a sufficient incitement to the attempt.

Petitions have been presented to both Chambers, to protest against the suppression of the "concours" in the election of Professors, and one of the petitioners has proved to demonstration, that the only object in this suppression is to serve the interests of M. Royer Collard. As a *physician* this gentleman is little known. He is at present, however, so connected with the medical chit-chat of Paris, that you will soon become acquainted with him. I must here observe, that so serious an accusation has devolved on M. Royer Collard by his own fault. We have such a propensity to judge of the intrinsic goodness of things by the event, that if this gentleman had taken the trouble to study chemistry, anatomy, and medicine, by way of qualifying himself to deliver a course of medical jurisprudence, there is no doubt but he would have saved Government from all the blame which this election has thrown upon it. William Hunter arriving, at the age of twenty-two years, from the mountains of Scotland, where he exercised the trade of a carpenter, became nevertheless one of the first anatomists of England. M. Royer-Collard, arriving at Paris at the age of forty from Chambéry, where he performed the duties of a commissary, might have found some better method of teaching medical jurisprudence than by reading lectures copied from a printed book, which is known to the whole world. The source from which the Professor drew these waters of science was soon discovered ; each student being able to taste them at the fountain head for the moderate sum of thirty francs, the price of M. Fodéré's excellent Treatise on Medical Jurisprudence, did not hesitate between this expence and the fatigue of listening to tedious lectures—so that the Professor found himself abandoned by his pupils, and left alone with his MS. in the vast amphitheatre of the schools of the faculty.

Such a mishap is certainly a sufficient apology for M. Royer-Collard's having given so few lectures in the first year of his professorship, and for having, during the succeeding years, renounced all public instruction. Still we are indebted to the Professor for the excellent course of lectures which his pupils heard in the summer of 1819. As director of the "Bibliothéque

Médicale," he insured the success of the work by contributing the fewest articles to it; as professor of medical jurisprudence he felt it his duty to resort to similar means to recall his truant pupils, and accomplished his object by employing M. Orfila to lecture for him, and the success of the experiment did not detract from the reputation of the learned author of the "Toxicologie."

Several nominations followed that of this able chemist. M. Béclard was called to the chair of anatomy, M. Marjolin to that of external pathology. MM. Fouquier and Roux have also been lately appointed, the first to the chair of the "Clinique de Perfectionnement," vacant by the death of M. Bourdier, the latter to a chair of pathology, vacant by the resignation of M. Percy. A-propos of this resignation; it is said in the medical world of Paris, that 60,000 francs was the price M. Percy received for this professorship—certainly a large sum for a place, the receipts and preservation of which are not certain.

The case is not without precedent; at Montpellier in 1786, M. de Barthèz sold a professor's chair to M. Grimaud for 30,000 francs. This is great authority for the venality of professorships; which, however, has one little inconvenience, i. e. that of excluding the poor man of talent, though it presents the inappreciable advantage of narrowing the field of favour—a divinity more to be feared than riches. Still we cannot complain of similar bargains, when they bring such men as M. Roux into a more extended sphere of usefulness. This excellent surgeon and learned professor must always have appeared to advantage in a concurrence with any rivals.

The claims of M. Fouquier to the chair of the Clinique de Perfectionement are less popular. You are perhaps acquainted with a curious memoir of this physician's, on the use of strychnos in palsy. This plan has sometimes succeeded in the Hospital of la Charité, but the physicians of the Hotel Dieu have not derived the same advantage from it. It certainly at first induces a species of convulsions which have a salutary effect, but its efficacy is soon lost. M. Fouquier is highly esteemed as a practical physician, and he has given some useful courses on the practice of medicine.

Since the suppression of the concours, the faculty of medicine presents to the choice of the committee of public instruction four candidates. The three latter are however only inscribed for form's sake. This sort of election is not at all approved by the faculty, who accordingly, in 1818, unanimously demanded that the vacant professorships should be given by the "concours." The committee of public instruction refused to accede

to this request, and to avoid all discussion with the faculty, resolved to choose the first of the candidates named. It was therefore without any chance of success, that MM. Husson, Récamier and Pariset were joined candidates with M. Fouquier.

The medical world was surprised that M. Alibert was not named amongst the candidates. The object of the professorship given to M. Fouquier, is undoubtedly the treatment of chronic diseases, and M. Alibert has distinguished himself by his skill in treating the most formidable of this class. But, perhaps, you will say M. Alibert did not solicit the honour. M. Double who did, did not obtain a single vote. It is a misfortune for these gentlemen, but a greater still for public education. The confidence of the King, and the high reputation of M. Alibert, are an ample indemnification; and M. Double may also console himself with the esteem of the most celebrated physicians, who consult him in all their difficult cases, and with the approbation which all Europe has conferred on his writings. Remark, that in what I have said, I by no means wish to make unpleasant comparisons, "Je ne décide point entre Genève et Rome." What I have stated merely tends to prove that candidates are not always chosen from their intrinsic merit or acknowledged reputation. You cannot but acknowledge that the works of MM. Alibert and Double are better known by the learned of Europe than M. Fouquier's Memoir on Strychnos, (the first hint of which was, by the way, given by M. Majendie) than M. Husson's reports on the propagation of vaccination, and than the articles of M. Pariset, inserted in M. Decazes's Journals—works, the merit of which, in other respects, I do not mean to question.

You have not forgotten that M. Pariset left Paris, by order of the Minister of the Interior, to observe the yellow fever which raged at Cadiz, with great violence, in the summer of 1819. In Europe, as well as in the tropics, this disease always disappears on the first approach of winter; a little trifling fact, of which M. Decazes ought to have been aware before he put the State to such an expense.

As M. Pariset was still at Madrid on the 23d of November, it is clear that he could not make observations on a disease which had already disappeared from Cadiz. The only subjects for examination would be convalescents, who are perhaps as fit to give an idea of the character of a disease, as a few stragglers, to convey an appropriate impression of the nature and strength of an army. If M. Pariset had departed three months earlier, he might have given us the result of his own observations; as it is, we shall only now have the opinions of the Spanish physi-

cians, which would have as well been transmitted by the post. As yet the fruits of such an expensive journey are confined to four coloured engravings, published by M. Pariset, which, announced at a moment when all eyes were directed to Cadiz, excited great curiosity. We expected at least portraits of Quiroga, Riego, plans of the fortifications of La Isla, and the redoubts of La Cortadura. It was a cruel disappointment for the curious to find three faces of men dying of the yellow fever, and fourteen isolated tongues; not tongues of eloquence and fire, but the dirty tongues of patients announcing to the eye and finger the state of the intestinal canal; and which are intended by M. Pariset to express the different phases of the yellow fever in succession. You will be surprised at this. Why? Since we class and describe diseases by the same method which botanists employ to class and describe plants, it is natural that we should endeavour to determine the characters of the former, by the aid of drawings. M. Pariset, indeed, must view diseases as enjoying great advantages in this respect; for Linnæus affirms that the colour of the corolla is too variable a quality to determine the distinction of vegetables; and our learned traveller considers the colour of the face and tongue as characteristic of diseases, in which the expression and colour of the face change from minute to minute. What will those physicians say, who have seen the yellow fever without any alteration of colour. What right shall we in future have to find fault with those who, incited by M. Pariset's example, may seize upon some favourite individual symptom, and give it as characteristic of the complaint, either the burning pain of the eyes, tension of the hypochondria, or the black vomit. One word of advice to M. Pariset. Should he continue his present plan of describing fevers by drawings, he must first get the following question resolved by some Academy of the Fine Arts. "To find the means of expressing, by painting, an abstract and complicated idea, without the aid of allegory." A disease is not a being; it is a phenomenon, or rather an union of phenomena, which may be viewed as depending on organic lesions. These organic lesions are always out of sight, and as little capable of being represented by drawings as those sensations, the existence of which is only known by the declaration of the patient.

M. Gall has commenced his annual course of craniology in the amphitheatre in the Rue St. Victor. This science is getting singularly out of fashion. Time was when M. Gall made us pay high enough for his lectures, and we had difficulty to fight our way to the door. Now we enter gratis, and there

is plenty of room. When M. Decazes was Minister of Police, he greatly encouraged the science of craniology, by giving its inventor a pension of 3,000 francs. M. Decazes undoubtedly found the science useful in choosing his counsellors; and if this Minister's reign had continued, the late preventive laws would have been founded on craniological principles. A subject which has more reality and practical application, is the excellent course of human anatomy which M. Béclard gives to the faculty of medicine. M. Dumeril had already greatly advanced the study of this department of anatomy, considered in a philosophical point of view. Some indeed thought that he too frequently introduced the subject of comparative anatomy. M. Béclard is more reserved on this point; but the composition and analogies of textures, the forms and relations of parts, both in a state of health and disease, suggest to him at every step a variety of interesting general observations, which enliven the dryness of anatomical discussion, and are almost all of practical application. M. Béclard, before he became professor, underwent the probationary trials, as "chef des travaux anatomiques." MM. Dumeril and Dupuytren occupied this honourable post before him. M. Breschet now fills it in a manner which will soon place him on the distinguished level of his predecessors. M. Chaussier still teaches physiology, and gives two lectures a week. This learned teacher always displays the same profound views, and the same originality of ideas. He still preserves his prejudices against the accessary sciences, which he calls "strangers to medicine," and against chemical explanations of phenomena, which he styles chimerical.

Since Professor Cuvier has become a statesman, and science is only the amusement of his leisure hours, by virtue of the number of lucrative places which this amusement procures him, there are no other lectures on comparative anatomy at Paris, but those given by M. de Blainville, at the "Faculté des Sciences." They are very well attended, and would be more so if the theatre of the College de Plessis were larger. M. de Blainville, as a savant and professor, promises to be a worthy successor of his master Cuvier, whom we trust he will follow in his Linnæan zeal for the science of nature; but we hope he will not imitate him in those pretensions to nobility, which made Buffon ridiculous though born noble. nor that in love of office, which was the misfortune of Pliny the elder, and of which M. Cuvier seems to have his share.

You are acquainted with the work which M. Geoffroy de Saint Hilaire published last year on philosophical anatomy, in which he endeavoured to bring all the types of organization to a primi-

tive and unique form. M. Geoffroy continues to illustrate his discoveries at the College de Plessis before a numerous audience, and demonstrates that "insects are provided with a skeleton as complete as that of the large quadrupeds; that the crustaceæ do not walk upon their claws, but upon their ribs." It is a pity that man is not a lobster, for then, like our first father, Adam, we might lose our ribs without being aware of it, which would have diminished the risk which M. Richerand ran in removing those of the unfortunate Michelleau, in his famous operation for cancer. For a long time M. Richerand has published nothing but new editions of his old works—it is matter of regret; for this surgeon has great talents as a writer. The clearness of his style is admirable, and his works have been universally popular as elementary books.

Ce que l'on conçoit bien s'exprime clairment.

This is not universally true, though Boileau said it, in respect to him who writes, nor in regard to him who speaks; it may be for the one without being so for both at once. M. Richerand as author, and M. Richerand as professor, are two very different persons. It appears to be matter of regret that M. Richerand should have changed his former chair of external pathology for that of operative medicine. In the latter he had to succeed M. Dupuytren. Who could stand the comparison? M. Dupuytren is perhaps the only surgeon, who with C. Bell and M. Delpech, has made it his study to teach the art of operating by showing the relation of different methods with the structure of parts, and by determining the advantage of each proceeding according to the alterations of form produced on organs by disease.

The lectures on chemistry, are of all the lectures delivered at the Faculty of Medicine during winter, the best attended. What can I say of the professor who attracts such crowds, which you do not know, and which all Europe has not repeated? He who wishes to know chemistry thoroughly, must attend M. Vauquelin. He who wishes to see chemical facts philosophically arranged and illustrated by experiments skillfully performed, must go to the College of France, and to the Faculty of Sciences, to hear M. Thénard; but he must make haste, for it is as difficult to get a place to hear Thénard as to see Talma. Chemistry has not a more zealous cultivator—science has not a more eloqnent advocate.

A new and rival school has risen by the side of the Faculty of Medicine. A generous opposition is already the result, and it will probably save the medical schools of France from the

destruction which hovers over them. Indeed the school of Val-de-Grâce can only yet boast of one professor of celebrity, but this teacher is endowed with real talent. He has all the enthusiasm of a reformer, and the power of communicating it when necessary. It is in vain to conceal the influence which M. Broussais already exercises, not only on the studies of the pupils, but on the practice of the physicians of the capital. As this influence is the most important fact I have to communicate at present respecting our science at Paris, I shall take an early opportunity of detailing to you the doctrines of M. Broussais. It would not be judging properly of his doctrines or practice to repeat with the public, that the annual consumption of leeches in the civil hospitals of Paris, which constituted only an expence of 2,000 francs, is now 80,000. You will nevertheless have heard that M. Broussais is not so much in vogue as last year, when the Minister at War found it necessary to close the doors of the hospital to the crowd of students who besieged them. This was a wise and equitable measure. When the State admits soldiers into a military hospital, it only discharges an obligation which ought not to be accompanied with degrading conditions. The assistance, on the contrary, afforded to the indigent in the civil hospital, is an act of pure benevolence on the part of the State, which may be accompanied by such conditions or regulations as she may choose to impart. This distinction between military and civil hospitals, and its application to the education of pupils, appears to me a sufficient justification of the ministerial measure, without resorting to supposed jealousy on the part of the Faculty of Medicine, particularly when we all know the noble and loyal character of those to whom the direction of the medical service of the Val-de-Grâce was confided at the time. As the doctrines of M. Broussais are of a direct practical application, the above-mentioned circumstance may have retarded their propagation. It does not much signify. If these doctrines are true, reflection and time will only serve to establish them; if they are false, it is perhaps better that the pupils should defer the examination of them until they are qualified to judge and think for themselves.

Since M. Corvisart has retired, the medical clinic of M. Broussais is the only one which has had great success. I do not know why the course of M. Leroux at the clinical institute, established at such expence in the Hospital de la Charité, should be so ill attended, whilst the students follow with such eagerness the visits of MM. Alibert, Broussais, Cullerier, Esquirol, Husson, Jadelot, and Récamier. These physicians all give clinical in-

struction, either of their own accord, or by order of the administrative council of the hospitals. The differences in the practice of these gentlemen are worth knowing; and in my following letters, I shall give you a full account of them.

In London, the physicians and surgeons of hospitals have the same opportunity of giving practical instruction. Their only remuneration, in fact, arises from the fees they receive from their students. It is to be wished that this practice were introduced into the Paris hospitals. First, it would have the effect of driving from the wards that noisy crowd of students who almost suffocate the physician in his visit, perplex and harrass the surgeon in his operations, and worry and distress the patient unnecessarily. The facility which our students have of getting into the hospitals before they have acquired information enough to observe diseases, leads them to neglect their books, and interrupts their course of study. The English method of remunerating the medical officers excites an emulation which is equally advantageous to patients and pupils, for it evidently requires greater care where the observer must constantly give an account of his motives and actions to intelligent bystanders. To get pupils, good lectures must be given. To make good lectures, diligent observation is requisite, which leads to better care of the sick.

There are some people in the world, doubtless, who wish to establish the amount of a salary upon any other consideration than the service rendered for it; but we must look to a madhouse only to see the salary increase in *direct proportion to the diminution of attendance.* In the hospital of lunatics at Charenton, the following regulation appears: "The physician shall reside in the establishment; he shall receive a salary of 4,000 francs, and pay five visits a week; if he does not reside, he is to receive 6,000 francs, and pay only three visits."

Talking of the Charenton, I must give you an account of a new method of improving the salaries of physicians in hospitals where the patients pay for their board. This plan consists in assigning to the former a certain share, say two-twelfths, of the savings which are made on the sum the patient pays, rendering it of course the interest of the physicians to make this saving as considerable as possible. The salary of the physician, therefore, it is evident can only be limited by the bad intentions of a director too much attached to the welfare of the patients. This may be easily obviated. By the assistance of calumny the director is got rid of, and to prevent all future disputes, the direction of the hospital is made the marriage portion of the physician's daughter. I need not tell you that the Lunatic Asylum of Charenton is out of the administrative controul of the hospitals of Paris.

Do not forget, I beseech you, that I am writing the history of my own times from official documents. Do not boast of a law, which, to put your delicacy above all suspicion, has interdicted the practice of pharmacy. Cease to blame the pharmacomania of the English and Dutch physicians, who divide the spoils with the apothecaries; for where, either in England or Holland, will you find any thing to be compared with what I tell you? But then, it is true, neither of these countries bring up their physicians in the commissariat service.

When a man professes zeal for his profession and love for humanity, his ardour in discharging his duties is above all remuneration. At the Hotel Dieu M. Dupuytren receives a very moderate salary, which is neither directly nor inversely proportioned to the number of his visits, and which does not prevent him going winter and summer to the hospital from half-past five in the morning to ten, and again returning in the afternoon to see the patients who have been recently operated upon. Let us unite our prayers to those of the unfortunate, and hope that his health may long enable M. Dupuytren to persevere in his career of glory and humanity.

I did not intend to have here introduced the subject of clinical instruction; the mention of M. Dupuytren leads me in spite of myself to speak of his surgical clinic, which is attended by students from allparts of the world, and which is so distinguished for the reputation and talent of its present professor. We have three surgical clinics at Paris; each has a different character, and the three form together nearly a complete course of clinical instruction.

At the Hotel Dieu, M. Dupuytren, before performing an operation, establishes, in presence of a numerous audience, the causes which indicate it; he discusses the methods of operating employed by surgeons, and describes the one at length which he is about to put in force. The pupils are called to no consultation or conference; those only who are attached to the service of the hospital are employed in collecting the observations. The morning of Sunday is devoted to reading them in public, and correcting errors of fact or theory.

At the Charité, MM. Boyer and Roux alternately take charge of the clinical department. M. Boyer examines the house pupils on the patients entrusted to their care. The professor discusses the most important cases, and displays all that profound knowledge and practical ability which have long ranked him amongst our first surgeons.

In my opinion, M. Dubois's clinic, at the "Hospice de la Faculté," is that which approaches nearest to perfection. Cli-

nical instruction consists more in deed than in precept, but that the former may produce a salutary effect on the pupils, the professor must give an account of the motives which actuate him, and which can only be done where the patients are limited. In this hospital there are only forty beds, and the patients are selected with great care. M. Dubois can therefore devote to each patient a sufficient time to establish the diagnosis, and answer the questions which each pupil has a right to address him. In the theatre the professor enters on the cases which have been operated on, or those which are about to take place. The operation is then performed, after which M. Dubois sees the out-patients. Here he applies public instruction to private practice, and presents us in part with the advantages of those private establishments which in Germany are called "clinica ambulatoria."

M. Dubois is really indefatigable; to the experience of age he joins the ardour of youth. Charged with the instruction of female midwives at the "Hospice de la Maternité," he has just commenced a public course of lectures on midwifery for medical students. These lectures will be quite an epoch, and unfortunately they will be the last which M. Dubois will give on a subject which requires more to be reduced than extended. Who will be better able than this learned surgeon to reduce to their proper value the pretensions of those surgeons, who have only become great accoucheurs because they were not fit for any thing else.

M. Roux has repeated with success, but in consequence of an accident which was unconnected with the disease, the beautiful operation of the suture of the velum palati, which he was the first to practise, upon an American, who had had a congenital division of this musculo-membraneous part. Some months ago, at the Royal Academy of Sciences, the subject of this operation, whose voice before was hardly perceptible, read his own case very distinctly.

Our summer lectures are going to commence; and next month we shall have the pleasure of hearing those lectures on mental legal medicine, which, according to the letter of the President Royer-Collard to M. le Roux, are to be the honour of the Faculty and of France herself. During a year, Doctor Royer-Collard, says he, in spite of his laborious three visits a-week to Charenton, has prepared six lectures of the course; so all hope is not lost.

I am, VERIDIQUE-ALLEYES-ALLEARS.

ART. V. *Observations upon the Diseases of Professions. By Dr. Gosse, of Geneva.*

(Communicated by the Author.)

MAN, in a state of society, improves by the progress of civilization. That slow and successive improvement, compatible with the welfare of nations and individuals, seems in general to have been confined to the intellectual faculties; in many cases, however, the physical qualities have undergone great alterations.

In multiplying our wants, real or fictitious, civilization has provided the means of satisfying them; arts have been created, and thousands of individuals have made them their habitual occupation; but the labours incident to the exercise of these professions, are often inimical to the rules of Hygeia, predispose the organs to certain deleterious impressions, and thus give rise to the developement of numerous and varied diseases.

"L'homme," stys Tenon, "appliqué à une profession, à un art, en est une des parties intégrantes, il est par consequent soumis aux impressions que son genre d'industrie éxerce sur sa personne, qui sont les effets naturels de son travail mais qu'on doit regarder par rapport à lui comme autant d'altérations. Ce sont ces altérations que nous mettons au nombre des maladies qui prennent leur source dans l'exercice des professions." *

The various professions have each a very marked influence, not only on the structure of the body, but also on the faculties of the soul. Some trades act upon the whole person, produce on it characteristic modifications, and are fully expressed in the countenance and gestures. The celebrated Lavater has deduced from this proofs in favour of his system, and Professor Moreau (de la Sarthe) has pointed out this influence in a very ingenious manner. Other professions impress characters upon more important organs and disturb their functions, the intellectual faculties are deeply affected, and the man is transformed into a different being. No part of the body, no organ is secured from this influence, or is exempted from these alterations; and it will be sufficient to glance at the effects produced upon the different functions, to recognize the truth of this assertion.

Organs of sensation.—Among the organs of sensation the eyes merit in the first place our attention. The strong and continued action of light and heat on the workmen exposed to an ardent fire, as founders, glassmen, &c.; the straining of these

* Mémoires de l'Institut. Classe des Sciences Physiques. Tom. VI. Mémoires sur les Chapeliers.

organs in those who are employed in fine work, as watchmakers, engravers, some printers, &c.; the action of irritating dust or vapours in feather dressers, nightmen, &c.; and that of metallic particles in locksmiths, are so many causes which exalt, pervert, diminish, or abolish the functions of these parts.

Hearing becomes obtuse, or is destroyed, under the repeated strokes of the hammer among braziers, those who beat plates for engravers, &c. and by the thunder of cannon among artillerymen and soldiers; the same cause, combined with the damp of cellars, produces analogous effects in coopers.

The smell is weakened, or extinguished, by the action of fire, of irritating vapours, and particles, in glassmen, limesellers, &c.

The taste becomes depraved amongst the greater number of workmen exposed to metallic vapours, and particularly those who handle mercury and arsenic.

The touch is not less injured by the contact of rough bodies, the action of fire, of the sun, and filth, in many artizans. We see every day the smiths seize burning iron, which could not be handled by others without producing serious accidents.

Organs of sensibility.—The sensibility is morbidly increased in a general or local manner in most of the sedentary artizans, whether from general weakness, the compression of some parts, the irritation of certain substances, or of a high temperature. The workmen exposed to mercurial exhalations are so sensible to the variations of the atmosphere, that they may be compared to living barometers. I have seen several gilders and hatters who could prognosticate, with as much certainty as physical instruments, the approach of rain or cold, though there was not any appearance of change in the weather. A man employed at Paris in a manufactory of water-proof leather, which he was obliged to impregnate with oily substances at a high temperature, became so sensible to cold that it was necessary to allow him a pension, in order to his passing the remainder of his days in a sort of stove. Painful swelling of the nerves, particularly of the sciatic nerve, are not rare among the workmen exposed to cold and damp, as miners, sailors, or in trades where sedentary habits prevail. Sensibility is also perverted by the causes before-mentioned. I know a hatter who experienced a sensation of cold whenever he touched metallic bodies, although their temperature was considerably raised; neither had he a proper idea of the nature of surfaces. The sensibility is suspended in the asphyxias produced by sulphurated hydrogen and carbonic acid, accidents so frequent amongst the nightmen, and those who work in cellars, where liquors are in a state of fermentation.

Organs of locomotion.—The sameness of the movements in some trades impresses a stamp upon these organs, and gives rise to diseases generally troublesome and often incurable. The osseous system is altered in its form and structure, in most of the professions which require in their exercise considerable efforts or vicious position, and which expose to numerous accidents, or to defects of nutrition: such are porters, those who work in wine-yards, in mines, in quarries, or damp places, the nightman, &c. &c. Certain metallic substances, particularly mercury and lead, produce a morbid excitation of the muscular system, or suspend its functions; under this head are gilders, plumbers, varnishers, &c. The sudden and immoderate exercise of all or some of the voluntary motions is not less dangerous, and racers, leapers, dancers, shoemakers, writers, &c. may be mentioned as examples. In 1819, a professed runner, near London, after having gone over a considerable extent of ground in a very short time, lost for a long period the free use of his legs. The rope dancers, who astonish every one by their agility, often purchase the applause they labour for with the loss of a limb.

Organs of digestion.—The organs which concur in that function being numerous and various, I shall consider them briefly and successively. Mercury, vapours, and a strong fire alter the organs of mastication, and the functions of those of salivation and deglutition. The stomach not only participates in that derangement, but is, besides, the seat of particular diseases, occasioned by some substances as arsenic, or by long continued pressure as in shoemakers. The diseased state of the abdominal viscera, and the irregularity of the intestinal functions so often observed, are frequently the result of the sedentary life, and of the bent position of the trunk, which is necessary in many trades. In this class, shoemakers, tailors, people in offices take their place; and it is certainly one of the most numerous and interesting. Extraneous metallic or earthy substances, mercury and lead in particular, in a solid state, or as vapour, when introduced into the abdominal cavities, increase the sensibility of that region, and modify the action of the muscular apparatus which constitutes a part of it. Plumbers, gilders, steel-workers, precious stone and glass-cutters, sometimes common stone-cutters, furnish us with examples of this. The displacing of the intestines from their natural position is not rare in those whose abdominal muscles are strongly contracted, or in a state of relaxation, and who are kept in a forced position, such are porters or riders; and the Monks in some

countries must, perhaps, attribute the frequency of the herniæ amongst them to the laxity of their habit, and to the hypocritical exaggeration of their religious exercises.

The urinary organs participate certainly with that diseased state occasioned by the above enumerated causes.

Sedentary professions being unfavourable to cutaneous perspiration, especially when carried on in damp places, increase the activity of the kidneys, and irritate them ; this has been observed in weavers. Those who often handle the volatile oils suffer the same inconvenience. The bladder distended becomes the seat of irritation, or falls into a paralitic state. People who study much require every day the advice of their physicians on that account. Though urinary calculi or gravel are not unfrequent amongst persons of sedentary habits of life, I have not observed any influence of the professions on their formation; and in Norwich particularly, where I collected facts on the subject, I could not trace any correspondence between this cause and the unusual frequency of calculous disorders.

Organs of respiration.—Parts so delicate as the lungs, and so much exposed to various external agencies, could not fail to present severe affections resulting from such causes, and to attract from the beginning the attention of ancient physicians. Among the predisposing causes, are particularly to be placed noxious vapours and dust. Sometimes their action is confined to the larynx, or to the trachea, and they prevent the free circulation of air, by the irritation they excite and the swelling brought on ; in other cases they penetrate more deeply, disturb mechanically the important functions of the bronchiæ, occasion there a state of morbid excitation, produce irregular convulsive motions as in other muscular organs, or give rise to lesions of continuity and to congestions of blood ; lastly, they even suspend the functions of the parts. Along with gilders, manufacturers of acids, the nightmen, we should mention here hatters, the coalmen, millers, feather dressers, furriers, &c.

Sudden changes of temperature are not less hurtful to the respiratory organs than to the skin, between which there is an intimate connection ; and the workmen who are of necessity exposed to the action of cold and damp, to the rapid transition from heat to cold, or to commit imprudences in the exercise of their trade are subjected to disorders of the respiration which often become fatal. Numberless examples are furnished by glassmen, curriers, founders, washerwomen, and many other professions. Similar effects are produced by a sedentary life, and the bent position among tailors, shoemakers, &c. Finally,

the violent, repeated, or imperfect exercise of the lungs in running, singing or speaking, often produces the worst consequences.

Organs of circulation—Arterial and venous systems.—Though it is very difficult to discover the morbid action of professions upon the heart, we cannot overlook it in many cases. People who by their habits of life, or by their occupation, are called to impede or suspend the free circulation of the blood, are necessarily more liable to irregularity of the functions of the heart. The compression of some vessels in sedentary professions, and the stagnation of the blood, which is determined by long continued vocal and bodily exertion, induce a distention of this organ. An increased morbid action called forth by passions, is neither rare nor difficult to recognize in advocates, orators, actors, &c. The famous Mirabeau laboured under an inflammation of the pericardium, and owed his death to the exciting causes already mentioned.

Arteries are also subjected to alterations by those influences which tend to weaken or rupture their coats. Morgagni has left many interesting observations upon the diseases of the aorta observed in tailors. I have seen similar changes in both the subclavian arteries among shoemakers, which had been evidently determined by the brisk motion which they have to perform outwards when they sew the leather of the shoes. The sudden extension of the lower extremities often produces lesions of the popliteal.

The accidents which follow the rupture of the pulmonary vessels have been alluded to. Diseases of the veins, of the trunk, and of the extremities, are in many cases almost unavoidable consequences of a sedentary life; and the agitation communicated to the whole body by equitation, does not prevent the post-boys from being much troubled with varicose veins, hæmorrhoids, &c. The blood itself has undergone alterations, and the quantity of the cruor seemed lessened under the influence of certain causes, yet unknown, in the workmen of some coal mines.

Lymphatic system.—Occupations in damp and close rooms, standing in cool places, and in cold water, must necessarily act in a disadvantageous manner upon the functions of this system; we see therefore the lymphatic ganglions morbidly excited or obstructed, and the vessels incapable of exercising their absorptive action among the workmen in the cotton manufactories, in fishermen, in those who construct floats, &c. The bronchial lymphatics present a morbid blackish appearance in coalmen, undoubtedly the result of their work.

Dermoid and epidermoid system.—The skin which we are now to notice, notwithstanding the disadvantages of its position, the importance of its functions as an excretory organ, the vascularity of its texture, and the irritability it particularly enjoys, is, in general, less influenced by external causes than many internal organs. Nevertheless, it is sometimes the seat of characteristic local excitations and alterations. Tailors, in consequence of the uncleanliness peculiar to their trade, of the irritation which woollen cloths and colouring matter produce on the hands, or of the obstacles which a sedentary life opposes to the free perspiration of the skin, are subjected to eruptive diseases. Grocers, masons, washerwomen, shoemakers, picklemen, &c. whose hands are almost continually in contact with irritating substances, are not exempted from them. Climbing boys in England have been found to be subject to a peculiar local disease of the skin on the scrotum and the groins, which was supposed to arise from the qualities of soot, or from a repeated pressure. Pott, and, in modern times, many other practitioners have ascertained the fact and established the treatment, without sufficiently investigating the exciting causes; as the climbing boys in Vienna, I have been told, placed in different circumstances, and not exposed to the soot of coal, present a similar disease. Tailors and shoemakers are often subject to circumscribed inflammatory swellings, and partial mortifications of the cellular texture underneath the skin of the buttocks. The skin of the legs is frequently affected by mechanical agents, which hurt and weaken those parts or impede their circulation. The epidermis of the hands is sometimes altered by the processes of dyeing, by the action of hot water, of fire, in hatters, smiths, &c. by local pressure in shoemakers, boatmen, &c.; that of the knees and elbows is equally thickened by pressure and friction in climbing boys. The hair also acquires a peculiar colour, or loses its former one, in some workmen who frequently handle copper, or those employed in manufactories of mineral acids.

Organs of generation.—Of all the parts of the body, the organs destined to the re-production of our species have been the less influenced by the professions. Sedentary trades prevent, or morbidly hasten, the developement of puberty in the female sex, provoke morbid secretions, and the displacement of those organs. Washerwomen and cooks, who plunge their hands suddenly or alternately in warm and cold water, whose feet are commonly damp and cold, are much subject to an irregularity or defect of the uterine functions. Other women, on the contrary, employed in weaving cloth, and the pelvis of whom participates in the motion of the lower extremities, are

rather disposed to an opposite excess. The testicles are not only exposed to accidents in mechanical trades, but can be injured by continual pressure in those who ride much; and ancient authors in the account they give us of the Scythians, have mentioned that circumstance. Finally, they are the seat of a peculiar disease, to which the workmen who extract arsenic from mines in Saxony are liable.

Having finished the general review of the action which professions exercise upon the principal organs of the body, it would be interesting to examine their influence upon our passions and intellectual faculties; but I fear to enter into that discussion now, and to investigate superficially metaphysical problems of such an interest and such a difficult solution. I only wish here to state that this influence is not less striking than that upon the body; it is often a consequence of this last, and therefore can be prevented or removed together with it; and the inactivity of the mind though not less dangerous, is more easily to be remedied.

Noxious vapours, particularly metallic, by their action upon the brain, alter that organ and its functions. The memory, in some gilders, hatters, &c. when under the influence of mercury, is commonly impaired. Their hypochondriacal disposition is very distressing to themselves, to their friends, and anxiety agitates their mind.

Sedentary occupations bring on hypochondriasis, together with irregularity of the nutritive functions. Such persons are very irritable, without being courageous; their views and plans fantastical, their passions sometimes violent, arbitrary, and without much reflexion. Suicide is not rare amongst them; and lunatic asylums are not unfrequently the retreat of these unfortunates. In many instances, on the contrary, activity of mind is the result of an habitual bodily exertion. Friseurs are known by their activity and their want of steadiess. Physicians, in general, are not less active, but of a more solid character.

The literary pursuits of learned people, of persons employed by the Government, devoted to the welfare of their country, or the improvement of science, give them a peculiar turn of mind, and when duly directed, render more perfect the moral and the intellectual faculties.

Imagination is developed and kept active by the occupation of painters, poets, advocates, &c. Commerce favours self-interest. The forced celibacy of soldiers, sailors, and of some religious communities is pernicious to morality. The habit of killing animals, of witnessing their sufferings, has proved fa-

vourable to the developement of cruelty. Butchers have been in general, violent and barbarous in times of anarchy. Physicians, surgeons, experimental physiologists especially, lose sometimes the delicacy of a noble and disinterested compassion. The too famous Marat, when young, is said to have tried experiments on living animals, in order to ascertain the functions of the heart. In that point of view, it is therefore, perhaps, not without reason, that some eminent physicians have opposed themselves to the injudicious frequency and the abuses of these modern scientific hecatombs.

Notwithstanding what has been said, all arts have not a pernicious influence; habit often renders their effects less hurtful, and many of the evilsthey produce, are not so much necessary consequences of them as the result of the imperfect processes in use. The bad quality of the food, excess in drinking, the imprudence and misery of the workmen, form many troublesome complications, independent of the professions, and are not less active in the developement of diseases which they render incurable, and the nature of which they obscure. The Hebrews in Egypt, loaded with heavy burdens, obliged to build towers, gigantic monuments, and to perform dangerous labours, preserved themselves by their sober manner of living, vegetable food, the use of onions, &c. from many diseases inherent in these works.* Some arts act even as preservatives from morbid affections, preventing their appearance by the use of proper exercise, the nature of the substances employed, or of the air respired. Ramazzini informs us, that those who work in copper, are rarely attacked with ophthalmia; that the women occupied in weaving cloth are never subjected to irregular menstruation. Those who exercise much their lower extremities, and fullers, whose feet are plunged in a bath of urine, are never affected with arthritic pains. The nightmen are exempted from cutaneous diseases.† Butchers and fishmongers are rarely attacked by phthisis.‡

Industry not only influences the health of individuals; it can not to be doubted that it exercises a powerful action upon large bodies of men, and that it gives rise to endemical diseases. Is not the cultivation of certain vegetables—rice, for instance, a

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* Vid. Exod. Chap. I. Vers. 11, 12, 13.

† De Morbis Artificum. Veneziæ, 1743.

‡ Beddoas, Th. An Essay on the Cause, early Signs, and Prevention of Consumption. Bristol, 1799.

source of evil to the labourers, and the inhabitants of extensive districts?* Have not large manufactories, and the mephitic vapours which escape from certain workshops, a deleterious influence on the neighbourhood, particularly when situated in towns?

This recals to us the pernicious effects which arose from several manufactories of mineral acids and of artificial soda in the town of Marseilles.† A manufactory of antimonial preparations established in Saumur, had also a remarkable influence on the health of the inhabitants, and even on the vegetation of the neighbourhood.‡ It is now well known, that slaughter-houses, the workshops of curriers, manufactories of glue, of starch, of mineral acids, the preparation of flax by maceration in stagnant water, &c. alter the qualities of the air, communicate to it a noxious character, and thus give rise to, or favour diseases, which, without being epidemic or contagious, attack numbers at the same time.§ The influence of arts also, in epidemic diseases has been proved by the observation of many centuries; some privileged professions have escaped in particular epidemics, whilst in others it was universally fatal to the workmen. Hippocrates speaks of an epidemic which committed great ravages among the fullers at Athens.‖

The plague which reigned at Marseilles, in 1720, carried off all the bakers.** J. P. Lotichius, in his Treatise de *Casei nequitia* relates, that a village near Francfort, where cheese was made, became the focus of the epidemic which was so fatal in that town in the seventeenth century. Dimmerbroek†† observes, that during the plague of Nimweguen, the washer-women were soon the victims of that disease, and he attributes it to the vapours arising from the dregs of the ley; but Dr.

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* The danger of the cultivation of this article is so well known in Italy, that in the beginning of 1816, a rice ground having been established near Bologna, the peasants rose in a body to destroy it. Vid. Journal du Commerce, Paris, May, 1816.

† Rapports de la Société de Médecine de Marseille dans la Séance du 25 Novembre, 1810, p. II, 12, 13.

‡ Fodéré Traité de Médecine légale, &c. 2d. edit. Tom. VI. p. 31.

§ Vid. Rapport de la 1ere Classe de l'Institut fait dans la Séance du 26 Frimaire, An. 13, en réponse à la question, " Si les Manufactures qui exhalent une odeur désagréable peuvent être nuisibles à la santé.

‖ Epid. VII. Num. 39.

** Bertrand Rélation Historique de la Peste de Marseilles, &c. 1720.

†† Tractatus de Peste, Lib. Cap. III. Annotat.

Reid, of Dublin, has made observations, during the late epidemic of typhus, which contradict this and recommends, in consequence, steam as a preventative and curative method in that disease.

Palmerius quotes from Shenkius, that during an epidemic which raged in Paris, the curriers were exempted from it.* I have collected some facts in Germany, which agree with that observation. In several other epidemics, the nightmen escaped from the death which surrounded them. The apothecaries, at least, continental ones, are rarely affected with contagious and epidemic diseases.

The oilmen are commonly preserved from them. "Ces faits singuliers," says Fourcroy,† "ne pourraient ils pas répandre un très grand jour sur la nature, la marche, et la guérison des maladies épidémiques. N'est-il pas probable que des observations réitérées sur les ouvriers qui sont tous frappés de contagion, ou qui lui échappent tous, éclaireraient sur sa cause, et que cette cause une fois connue, ouvrirait un chemin à la découverte de celle des epidémies."

The ideas which that celebrated French chemist had conceived, have been partly confirmed by experience; the employment of oily frictions, the habit of wearing cloths impregnated in imitation of those who are daily handling that liquid, has been perfectly successful as preservative in many pestilential epidemies.‡

The plague having spread desolation in the Crimæa, in 1812-13, M. Pictet de Rochemond, jun. of Geneva, intrusted with the direction of a colony there formed, succeeded by means of this method, and of the severe measures which he speedily adopted, to preserve the people from this devastating scourge. Finally, it is to that practice that the inhabitants of Malta partly owed their safety in the plague of 1818.

(To be continued.)

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* Ramazzini de Morbis artific. Caput XIV.

† Encyclopedie Méthodique (Médecine) Tom. III. p. 314.

‡ Vid. Desgenettes Histoire Médicale de l'Armée d'Orient. Part II. p. 36.

ART. VI. *Reports of the Epidemic Cholera, which has raged throughout Hindostan and the Peninsula of India, since August,* 1817. *Published under the authority of Government.* Bombay, 1819.

THESE reports contain an account of the epidemic cholera morbus, which has lately raged with so much violence and fatality in India. They consist of the Report of the Medical Board at Bombay, and the various documents which were furnished by the medical officers who had an opportunity of witnessing the progress of this formidable disease. They are highly creditable not only to the individual talents and exertions of the medical officers, but to the liberal zeal with which their exertions were seconded and approved by the government of these important possessions of the British empire. We heartily wish that the same watchful guardianship of the public health were equally manifested by the governors of our West India colonies, where so many of the brave defenders of our country, after fighting the battles, and escaping the dangers of an European campaign, have lately met with an ignoble grave, without any inquiry being instituted into the nature of the climate and its diseases, or the means of rendering them less destructive of human lives.

The epidemic of which these reports form a simple and faithful record, made its first appearance in the month of August, 1817, in Zila Jessore, situated about a hundred miles north east of Calcutta. From this town, which it nearly depopulated, it rapidly spread through the adjoining villages, and ran from district to district, until it brought the whole province of Bengal under its influence.

"It next extended to Behar; and having visited the principal cities west and east of the Ganges, reached the upper provinces. There, its progress was more irregular. Benares, Allahabad, Goruckpore, Lucknow, Cawnpore, and the more populous towns in their vicinity, were affected nearly in the regular course of time. But it was otherwise in more thinly peopled portions of the country. The disease would sometimes take a complete circle round a village, and leaving it untouched, pass on, as if it were about wholly to depart from the district. Then, after a lapse of weeks, or even months, it would suddenly return, and, scarcely re-appearing in the parts which had already undergone its ravages, would nearly depopulate the spot that had so lately congratulated itself on its escape. Sometimes after running a long course on one side of the Ganges, it would, as if arrested by some unknown agent, at once stop; and taking a rapid sweep across the river, lay all waste on the opposite bank. It rarely, however,

failed to return to the tract which it had previously left. After leaving a district or town, it sometimes revisited it; but in such cases the second attacks were milder, and more readily subdued by medicine, than those in the primary visitation."

In the first week in September it made its appearance in Calcutta, where it raged with dreadful fatality for several months. From January to the end of May, the deaths in the city seldom fell short of two hundred a week.

"It in turn, attacked every division, and almost every corps in the army. Of its fatal effects amongst the troops, a melancholy and signal instance is afforded in the history of its appearance in the centre division of the field army, under the personal command of the most Noble the Commander in Chief. There it commenced its attack on the 18th or 19th of November; was at its utmost violence for four or five days; and finally withdrew in the first days of December. The division consisted of less than ten thousand fighting men; and the deaths within twelve days amounted, at the very lowest estimate, to three thousand; according to others to five, and even eight thousand. The average loss of rank and file was between eighty and ninety men a battalion."

The disease began to disappear in most places towards the middle of June, and by the beginning of September, 1818, it was considered to be at an end in Bengal and the middle provinces. There were then no returns of the disease in the reports from the different divisions of the army. At Delhi, Futtigur, and others of the more northern stations, whither it had been long spreading, the disease was still in full force, and producing the most alarming mortality. Towards the end of May it appeared in the neighbourhood of Nagpour, amongst the troops, and at Jaulnah about the beginning of July, immediately after the arrival of a detachment from Nagpour. After visiting Aurangabad and Amednuggur, it reached Seroor, a distance of 150 miles, on the 18th or 19th of July. Towards the latter end of the same month, it appeared in the city of Poona. On the 6th of August, it broke out with great violence at Panwell, situated between Poona and Bombay, and distant from the latter about fifteen or twenty miles. On the 9th or 10th of this month, the first case appeared at Bombay, and according to some could be traced to a man who had arrived from Panwell the same day. It increased with amazing and fatal rapidity till the end of the month, when it began to abate. The disease continued to decline till the 8th of November, on which day only sixteen cases were reported. From this period to April, the numbers varied; and at the last report (April 6), the disease continued at the rate of ten cases daily, but was greatly divested of its

fatality. The last place mentioned as being visited by this disease was Salsett, an island lying a little west of Bombay, where it was gradually spreading on the line to Surat and the northern countries.

Having thus given a sketch of the course and progress of the disease, we shall proceed to describe the symptoms by which it was characterized, the method of cure adopted, and the opinions which were entertained of its nature and origin. It is generally admitted that no marked peculiarity of the weather was observed, previous to its appearance; and it does not appear to have been at all affected in its severity or progress by the circumstances of season, temperature or moisture. It was observed to prevail with equal violence when the thermometer was at 40° or 50°, as when it stood at 90° or 100°—during the prevalence of incessant rains for months, and when the face of the earth was scorched by long continued heat and drought. The disease was very uniform in its principal features, and attacked indiscriminately people of all nations, constitutions, and habits of life;—the healthy and unhealthy—Europeans and natives—the Mussulman and Hindoo. These circumstances, as well as some striking feature of the disease, induced the Board to consider the name of cholera morbus as inapplicable; a conclusion, however, which we consider as by no means warranted by either. In the following extract from the Report of the Medical Board of Bengal, this cruel disease, as it presented itself in its most violent form, is described with great perspicuity and elegance.

"The attack was generally ushered in by sense of weakness, trembling, giddiness, nausea, violent retching, vomiting and purging of a watery, starchy, whey coloured, or greenish fluid. These symptoms were accompanied, or quickly followed, by severe cramps; generally beginning in the fingers and toes, and thence extending to the wrists and fore arms, calves of the legs, thighs, abdomen, and lower part of the thorax. These were soon succeeded by pain, constriction, and oppression of stomach and pericardium; great sense of internal heat; inordinate thirst; and incessant calls for cold water, which was no sooner swallowed than rejected, together with a quantity of phlegm, or whitish fluid, like seethings of oatmeal. The action of the heart and arteries now nearly ceased; the pulse either became altogether imperceptible at the wrists, and temples; or so weak as to give to the finger only an indistinct feeling of fluttering The respiration was laborious and hurried; sometimes with long and frequently broken inspirations. The skin grew cold, clammy, covered with large drops of sweat; dank and disagreeable to the feel, and discoloured; of a bluish, purple, or livid hue. There was great and sudden prostration

of strength; anguish, and agitation. The countenance became collapsed; the eyes suffused, fixed, and glassy, or heavy and dull; sunk in their sockets, and surrounded by dark circles; the cheeks and lips livid and bloodless; and the whole surface of the body nearly devoid of feeling. In feeble habits, where the attack was exceedingly violent, and unresisted by medicine, the scene was soon closed. The circulation and animal heat never returned; the vomiting and purging continued, with thirst and restlessness; the patient became delirious or insensible, with his eyes fixed in a vacant stare: and sunk down in the bed; the spasms increased, generally within four or five hours."

The primary symptoms, in many cases, admitted of considerable variety. Sometimes the patient sunk at once, after passing off a small quantity of colourless matter by vomiting or stool. The matter vomited in the early stages was in most cases colourless or milky, sometimes green. The dejections were usually watery and muddy, sometimes red and bloody; and in a few cases they consisted of a greenish pulp like half-digested vegetables. In no instance was feculent matter passed in the commencement of the disease. The burning sensation at the stomach was a constant symptom; the whole abdomen was painful to the touch, and sometimes hard and drawn back towards the spine. The spasms seldom amounted to general convulsions, but appeared to be cramps or affections of particular sets of muscular fibres. The mind was obscured, and the patient staggered like a drunken man, or fell deprived of all voluntary motion. The pulse was regular, seldom above 100, extremely feeble, and in many cases altogether imperceptible. The mouth was hot and dry, the tongue parched, furred, white, yellow, red or brown. The urine was at first copiously secreted, but in the course of the disease it was scanty and acrid. In some cases death was preceded by a cessation of pain and suffering.

When the disease terminated favourably, either through the powers of the constitution, or in consequence of medicine, the symptoms of amendment were the return of the natural heat, and the restoration of feculent alvine evacuations.

"When the disorder ran its full course, the following appearances presented themselves. What may be termed the cold stage, or the state of collapse, usually lasted from twenty-four to forty-eight hours, and was seldom of more than three complete days' duration. Throughout the first twenty-four hours nearly all the symptoms of deadly oppression, the cold skin, feeble pulse, vomiting and purging, cramps, thirst and anguish, continued undiminished. When the system shewed symptoms of revival, the vital powers began to rally, the circulation and heat to be restored, and the spasms and sickness to be considerably

diminished. The warmth gradually returned, the pulse rose in strength and fulness, and then became sharp and sometimes hard. The tongue grew more deeply furred; the thirst continued, with less nausea. The stools were no longer like water; they became first brown and watery, then dark, black, and pitchy, and the bowels during many days continued to discharge immense loads of vitiated bile; until, with returning health, the secretions of the liver and other viscera gradually put on a natural appearance. The fever, which invariably attended this second stage of the disease, may be considered to have been rather the result of nature's effort to recover herself from the rude shock which she had sustained, than as forming any integrant and necessary part of the disorder itself. It partook much of the nature of the common bilious attacks prevalent in these latitudes. There was the hot dry skin; foul, deeply furred, dry tongue, parched mouth, sick stomach, depraved secretions, and quick variable pulse, sometimes with stupor, delirium, and other marked affections of the brain. When the disorder proved fatal after reaching this stage, the tongue, from being cream-coloured, grew brown, and sometimes dark, hard, and more deeply furred; the teeth and lips were covered with sordes, the state of the skin varied, chills alternating with flushes of heat, the pulse became weak and tremulous, catching of the breath, great restlessness and deep moaning succeeded, and the patient soon sunk insensible under the debilitating effects of frequent, dark, pitchy, alvine discharges."

The bodies of those who died in the early stages of the disease are said to have exhibited hardly any unhealthy appearance. The intestines were pale and distended with air, and the abdomen on being opened emitted a peculiar offensive smell. Where the disease had existed for some time, the colour of the intestines varied from a deep rose to a dark hue, the stomach was found filled with a transparent, a green, or a dark flaky fluid; its internal coats in some cases were perfectly healthy; generally, however, they exhibited appearances of inflammatory action, which extended also to the duodenum. Sometimes a layer of coagulate lymph was adhering to the internal coat. The *large intestines* were filled with a muddy fluid or with a dark bile, according to the period at which the patient had been cut off. In most cases the *liver* was enlarged and gorged with blood; in others it was collapsed and flaccid. The *gall bladder* was invariably full of dark green or black bile. The spleen and thoracic viscera were generally healthy. The great veins were usually gorged, and appearances of congestion in the head were in a few cases observed, but in general the brain was sound.

When the disease made its appearance in any particular place, the greatest mortality took place during the first few days of the epidemic. This arose not from want of promptness on the part of the practitioners, nor from any ignorance of the proper

means of combating it, but from the extreme violence and rapidity of the disease, which ran, through its various stages, to a fatal termination, before its victims were aware of its real nature. When the disease first made its appearance in a corps, the men were unwilling to report themselves when they were attacked, and always fell a sacrifice to the delay, but when its nature became more manifest, and when it was found that a few hours were sufficient to seal the doom of the patient, proper remedies were promptly administered, and the mortality invariably decreased.

We have seldom known so much unanimity of opinion prevail amongst so many medical men, respecting the symptoms, nature, and method of cure, in a disease which spread so widely and destructively as this epidemic.

The principal curative means resorted to were bleeding, calomel, opium, and antispasmodics. These measures were adopted from viewing the disease as depending on irregular distribution of circulation, great congestion of blood in the abdominal viscera, and the presence of spasm of the stomach, duodenum, biliary ducts and intestines. The eminent success attending this practice proves the correctness of those views of the disease which led to its adoption.

Bleeding was almost universally employed, and was by most of the practitioners considered indispensible to the successful treatment of the disease. The great debility and coldness might seem to contra-indicate this remedy, but these symptoms they were soon led to consider as the effects of internal congestion, and it was always found that the pulse invariably rose on the abstraction of blood, that the most distressing symptoms were frequently relieved while the blood was flowing from the arm, the vomiting generally ceased, the burning sensation at the stomach abated, and the pains and spasms of the abdomen relaxed in severity. The relief in many instances was complete and instantaneous, and no return of the symptoms took place. It was sometimes necessary to repeat the bleeding according to the urgency of the symptoms. It was observed that bleeding was more necessary in Europeans than natives, but that in most cases it was necessary, and attended with the greatest success, according as it was early resorted to. Sometimes it was necessary to immerse the patient in the tepid bath, to make the blood flow—a practice which was at all times useful.

The next great remedy was *calomel*. This medicine was given fearlessly, in the large doses recommended by Dr. Johnson, and the happy effects obtained from it were fully confirmatory of that physician's sentiments of the operation of large

doses of calomel. It was given in doses of fifteen grains or a scruple, combined with two grains of solid opium, or followed by sixty or a hundred and twenty drops of laudanum. The effect was in general very speedy, and its sedative power in this large dose was admitted by all. If the first dose was immediately rejected, it was again repeated, and continued without any regard to quantity, according to the urgency of the symptoms; the disease in favourable cases yielded in the course of a few hours, and next day the gums were affected, sometimes to salivation. The addition of opium is of great service in assisting to allay the inordinate action of the stomach and relax the constriction of the biliary duct. In conjunction with these grand remedies, cordials, and antispasmodics, such as peppermint, æther, and the spiritus ammoniæ aromaticus, and other diffusible stimuli, were found most useful adjuncts. But the whole hope of success rested on bleeding, calomel, and opium. When these remedies were employed early and conjointly, the success was in every instance nearly certain. The patient generally fell asleep and awoke free from the most painful symptoms, or greatly relieved, and when bile appeared in the alvine evacuations, instead of the watery or white clayey matter, it was a sure sign that the remedies were effective, and amendment taking place. After these effects were obtained, it was necessary to give a mild laxative, and the carbonate of magnesia was generally found to answer the purpose.

It will be seen that the practice which proved so eminently successful in the disease is that recommended by Dr. Johnson, in his valuable work on the Diseases of Tropical Climates, and rests on the very accurate reasoning of that gentleman on the nature of cholera morbus; and we are happy to find that neither the Medical Board, nor the individual practitioners who contributed to the volume before us, have forgotten to acknowledge their obligations to his useful labours.

On the subject of the contagious nature of the disease we have said nothing, because the Medical Board have said little. Most of the contributors seem to agree that it was not contagious, and to this opinion, in the absence of all proof to the contrary, we are inclined to lean.

We cannot dismiss this article without expressing our admiration of the talents and zeal displayed by the different departments of the medical profession in India during the prevalence of this epidemic, and which met with such a gratifying reward in the eminent success which followed their prompt and fearless exertions, in removing one of the most cruel and fatal diseases that ever afflicted humanity.

ART. VII.—*Memoire sur les Fongus Médullaire et Hematode. Par J. P. Maunoir, de Genève.* Paris et Genève, 1820.

THERE is nothing which occasions greater confusion, or more tends to impede the progress of medicine, than multiplying names for diseases, and giving novel and opposite significations to terms which have already obtained a distinct acceptation. Of the bad effects of both practices we have had an instance in the history of the disease called fungus hæmatodes.

This morbid affection, which was first described in England, was originally noticed under very different names, such as spongoid inflammation, fungus hæmatodes, medullary sarcoma, and soft cancer, and it was only after the lapse of a considerable time that it was ascertained that under this multiplicity of names, but one disease existed. On this being established, the term fungus hæmatodes, which had been already applied to the disease, was by common consent preferred and retained to designate it.

Some years afterwards this name was imported by the French surgeons, who, captivated apparently by the beauty of the expression, adopted it instantaneously, but unfortunately without taking the trouble to make themselves acquainted with the meaning attached to it by the inventors. The consequence was, that they applied it to a totally different disease, viz. to those vascular tumours which we call aneurism by anastomosis, and when they exist at birth naevi materni. Thus, Boyer, in the second volume of his Traité des Maladies Chirurgicales, Paris, 1814, has a chapter, entitled, "Des tumeurs appelées variqueuses, on fongueuses sanguines, ou fongus hæmatodes;" and the same error is committed by Delpech, in the third volume of his Précis Elementaire des Maladies reputés chirurgicales, published in Paris, 1816. From this blunder then it happened that the French surgeons remained for a considerable period ignorant of the researches which had been made in England on the new disease there named fungus hæmatodes, and the peculiar ideas entertained regarding it.

At length, in the XXth Volume of the Dictionnaire des Sciences Médicales, article Fungus Hæmatodes, M. Breschet endeavoured to set his countrymen right on this subject.—Having pointed out the error committed by the misapplication of the term, and which Boyer Delpech and Roux had been chiefly instrumental in propagating, he proceeds to give a detailed account of the real fungus hæmatodes, by means of copious abstracts from all who have written upon the subject in England. The researches and opinions of our authors are com-

municated with great fidelity and impartiality, but we cannot help thinking that M. Breschet shews considerable illiberality and great want of candour when he afterwards pretends that these "auteurs anglais," from whom he has transcribed so extensively, have no merit whatsoever; that they have done nothing but described a disease which was very well described already. "Les médecins anglais dont eu tort de décrire comme nouvelle, une maladie connue depuis l'antiquité, bien decrite dans les auteurs, et particulièrement par plusieurs médecins français." We do not know if it be worth while noticing this paragraph with which M. Breschet concludes his article, but it is so entirely inconsistent with the author's own shewing, in what he has previously written, that we are only surprised a man like Breschet could have allowed it to be printed.

With regard to the disease being known "depuis l'antiquité," this is very probably the case, and no one we suppose ever said any thing to the contrary. Hernia, aneurysm, and many other diseases, have also been known, "depuis l'antiquité," but still we think Scarpa, Cooper, Gimbernat, &c. have done some good by looking at these matters a little more closely. Then as to the disease being "bien décrite, particulièrement par plusieurs médecins français." We wish M. Breschet had told us the names, and where to find the writings of these "médecins français," we should have been happy to have perused them; for, though he, and such as suppose that every discovery or invention should originate "d'une tête française," may not give us credit, yet, we believe, the pages of our Journal support our motto

"Tros Tyriusque mihi nullo discrimine agetur."

M. Breschet occupies upwards of sixty pages in copying from the writings of Burns, Hey, Langstaff, and particularly Wardrop; but does not give a single citation from a French author, indeed he could not, for there is not one of them who has written upon the disease in question. We are told that our fungus hæmatodes has been known in France as a variety of carcinoma; yet we have looked into their best modern systems of surgery, those of Boyer and Delpech, and in neither do we find such a disease as carcinoma noticed, nor do we meet with the description of a disease under any name which at all corresponds with our fungus hæmatodes; and surely, if this was a well known disease, and had been described "par plusieurs médecins français," it would have been noticed by such men as Boyer and Delpech. But enough of this.

Soon after the publication of the XXth Volume of the Dictionnaire, we find the following question proposed as the subject for a Prize Essay, for 1819, by the Royal Society of Medicine of Bourdeaux, and which would seem to indicate, that the article fungus hæmatodes in the dictionary, was not known to those who proposed the question:—" Determiner, d'après des observations exactes, les caracteres essentiels et distinctifs du fungus hematode (maladie désignée par differens auteurs, sous les noms de tumeurs sanguines, fongeuses, spongieuses, variqueuses, &c.) explorer ses causes, ses symptomes, son traitement, et ses principales modifications, selon les divers organes qu'il affecte."

It was to answer this question that M. Maunoir composed his Memoir, which Memoir gained the prize. Our readers are aware that these prize essays are expected to have a clear methodical way of treating their subject, and to which every thing else should be made subservient. Indeed, such of them as we have seen, resemble in all respects, those smart dissertations which " annuente summo numine," issue to the amount of several scores annually, from a certain northern university. There is the same profundity of thought and research in the one as the other; and the same contempt of novelty and of displaying ingenuity in trifles, by the authors of both.

M. Maunoir sets out with telling us, that—

" Il est evident que sous le nom de *fongus hematode*, on a confondu deux maladies, qui n'ayant que des rapports légers, et en quelque façon accidentels, différent d'ailleurs essentiellement. L'une qui consiste principalement dans la degénerescence des organes en une matiere cerebriforme, ou en termes moins vague, dans l'épanchement de la substance nerveuse. Je la nommerai *fongus médullaire*, reservant le terme de *fongus hematode*, pour des tumeurs vraiment sanguines et vasculaires; c'est-a-dire entierement composées d'un lacis inextricable de vaisseaux sanguins, réunis par un tissu cellulaire lâche, formant un ensemble d'un aspect spongieux."

Now, it is by no means evident that the two diseases which M. Maunoir speaks of were ever confounded under the name of fungus hematodes, at least we can assert they never were by British pathologists, and M. Maunoir shews something more than mere ignorance in the following sentence:—

" Cooper, dans son Dictionnaire de Chirurgie à l'article fongus hematode, donne pour synonymes, les expressions de fongus saignant (bleeding fungus), inflammation spongieuse (spongoid inflammation), cancer mou (soft cancer), carcinome sanglant. Voilà bien evidem-

ment les deux maladies réunies sous la même denomination de fongus hematode, et ensuite dans la description qu'il en fait au même article, l'auteur ne parle réellement que du fongus médullaire."

A man must be ingenious who would write such a sentence, for without ingenuity, an individual of the ordinary run of intellect would naturally think that when one and the same object receives several names, it is the latter which are alone multiplied, and not the object, which still remains single. Not so M. Maunoir. Mr. Cooper has given the synonimes of fungus hæmatodes, and in his description, speaks of one disease only, but M. Maunoir still asserts, " Voila bien evidemment les deux maladies réunies sous la même denomination."

M. Maunoir found the description of fungus hematodes, in Mr. Cooper's work very correct; and if he had taken the trouble to look at the article aneurism by anastomosis, in the same book, he would have there found those " bloody tumors," which *he* wishes to call fungus hæmatodes equally correctly described. But in truth, with or without reason, M. Maunoir wished to create new names. For ourselves, we think that nothing signifies so little as the name of a disease. It matters not whether our ancestors had called cancer scrophula, and scrophula cancer, or Paul Peter, and Peter Paul. But when a disease is known generally by a name, whatever it be, we think there is very culpable arrogance and presumption in the attempt to change it.

With respect to the name of fongus médullaire, we have no fault to find with it, but merely, that it is perfectly unnecessary, as the disease to which it is wished that it should be applied, has a very good name already. And as for the other proposed alteration, the objection just mentioned applies to it also, with the addition of another, viz. that the alteration is not an improvement. To call aneurysm by anastamosis fungus hematodes, would be calling a disease fungus which in truth never does fungate.

Besides what we have mentioned, M. Maunoir's Memoir contains nothing new to the English reader on the diseases of which he treats, the descriptions being entirely taken from our own authors. However, if our readers peruse the Memoir, they will find it to contain a *neat* account both of fungus hæmatodes and aneurysm by anastamosis.

ART. VIII. *Uebrsicht der Vorfalle in der G. H. Entbindungsanstalt zu Heidelberg von den Jahren* 1817 *u.* 1818. *Nebst einigen Bemerkenigen von hofrathe und Professor Dr. F. G. Nägele.*

Report of the occurrences in the Lying-in Hospital of Heidelberg in the years 1817 *and* 1818, *with some Remarks and Observations, by Dr. F. G. Nägele.* 1819.

WE have frequently had occasion, in our reviews of foreign literature, to advert to the excellent arrangement of the hospitals and institutions of Germany, and to the ardent zeal of the professors. We would more particularly notice the great advantage which is derived from the regular publication of reports detailing the various occurrences in their institutions, and histories of the most remarkable cases. These differ materially from those reports which most British institutions annually present to their governors or supporters, and which, being addressed to the public at large, do not admit of medical observations or discussions. The German reports, on the contrary, being wholly addressed to the medical profession, may be regarded as accounts given by the professors to their brethren, of the manner in which they are discharging the high duties of their station. They serve too as a constant stimulus to the exertion and attention of the professor himself, and eventually become the repositories of many important and valuable cases, which, but for this necessity of publishing, might never have been given to the world. Besides all this, they are in a great measure the thermometers of any new theory or any novel practice; for as it is in public institutions that we naturally expect them to be put to the test of experiment, we may look to their reports as surely indicating the rise or fall of any particular opinion, or the relative value of any similar remedies. It were needless to enlarge on the important utility of such a system, or to detail the advantages which might result should it be imitated in our own country.

We have been led more particularly into these reflections by the report we are about to consider, which, from its clear and accurate detail, cannot fail to impress our readers with a favourable opinion of the state of midwifery in Germany, and with great respect for the talents of Professor Nägele, the present Director of the Heidelberg Lying-in Institution.

We shall extract the principal features of the report, intermixing our remarks as we proceed. It commences with an account of the number of children born, viz.—1817, 139, there

being three twin cases;—1818, 128, there being one twin case. There thus were 263 women delivered of 267 children. During the first year there were born more boys than girls, the proportion being 71 to 68; but during the second year this was reversed,—78 girls and 50 boys. The report next proceeds to state the presentations which occurred, and the mode employed to manage them. In 256 cases the head presented, in five the breech, in three the feet, in one an arm, in one the breast, and in one the hip; and of the 256 cases, two were presentations of the face.

From this it appears that the proportion of unnatural deliveries not requiring instrumental aid, were 13 in 267, or rather more than 1 in 26, a proportion nearly resembling that stated by Dr. Bland, viz. one in thirty. The report too agrees with the Doctor's statements, extracted from an hospital register, in having twice as many breech cases as feet presentations. Dr. Merriman's statement too, made from actual practice, serves to support those proportions, according to whom, presentations of the nates occur, once in eighty-six, cases of the feet once in eighty, and of the arm once in 170. The arm cases in Dr. Bland's statement are more numerous in proportion to those of breech and feet, but bear nearly the same relation in general, being about one in 240. It is very pleasing to remark, from all these statements, that those abberrations from the natural course of parturition which are most frequent, are least important both to the mother and child, and that whilst a breech case may be expected to occur once in about fifty times, or a footling case once in about eighty, the more dangerous and important presentations of the arm, breast, or funis, scarcely occur twice in five hundred births.

Having thus recited the presentations which occurred, the report proceeds to the means by which delivery was accomplished. Nine cases only of the 267 required manual assistance; five of these were terminated by the application of the forceps, three by turning, and one (the hip case) by rectifying the presentation.

From this it would appear, either that our neighbours employ the forceps more frequently than we do, or that they resort to them much earlier; for according to Smellie, not more than eight cases in a thousand will require instrumental aid, and yet Dr. Hagen of Berlin employed the forceps in ninety-three cases out of three hundred and fifty. It is evident that if the instruments were always resorted to in similar cases, both here and abroad, such disproportion in the practice of individuals is scarcely possible; we must therefore examine the grounds on

which they are usually employed, and we apprehend that it will be then found that our neighbours, regarding them as safe and easy of application, employ them always much earlier than the generality of English accoucheurs, and frequently in cases in which we should dispense with their use. Accordingly the report informs us that in one case only was there any deformity of the pelvis, which is, we believe, in England the most common reason for resorting to them. In two cases they were applied on account of the inefficiency of the pains, in the one instance a living child was born, and in the other a half-putrid fœtus. This we believe to be precisely the case in which the Germans differ from us in practice, and in which we are strongly inclined to admire their promptitude and dexterity. In cases of inefficient action of the uterus, in which the patient is suffering great bodily pain and mental anxiety, without any proportionate benefit arising, we are perhaps too apt to leave nature to herself, or to induce sleep, with the flattering hope that when refreshed she will resume her task more vigorously; and although this practice very often succeeds, and the labour is eventually terminated without any instrumental interference, yet we are much inclined to think, with most of the foreign professors, that it would be better, as a general rule, to employ the forceps in such cases. What harm can they do? If skilfully employed, they are perfectly innocent, and the patient must certainly be left much less exhausted, and less liable to disease, not to mention the chance of the child dying by delay. Such were the arguments we remember to have heard used by Professor Osiander, when we conversed with him on this subject at Gottingen. "We employ the forceps (long curved ones) constantly here," he observed, "and with very great success, in many cases which in England you would leave to nature; and perhaps nature would complete them, but the women would be much exhausted. We have very few deaths, and never open the head." We regarded the last observation as the most extraordinary, and inquired of the professor his practice in cases of deformity, which did not admit of the application of forceps. "Such cases," he answered, "are exceedingly rare here. I have met with but three in which I could not use the instruments, and in these I performed the Cæsarian section *."

We now arrive at a very pleasing feature in the report, and

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* The professor is one of the oldest teachers, and one of the most scientific men in Germany, and has for many years been Director of the Lying-in Hospital at Göttingen. We hope soon to make our readers acquainted with some of his works.

one which demands our attention. It is the announcement that there has not only no death occurred during the period now under consideration, but that since the foundation of the institution in 1814, during which time 778 persons have been delivered, only one has died, in whom death was induced by the bursting of a vomica, not by any circumstances connected with her delivery, which was easy and safe.

It must be admitted as a fair subject of boast to an institution of this kind, as well as to the professor who directs it, that during so long a space as five years, no fatal event has occurred. We are ready to admit that this may be termed fortunate, and that death in child-bed is by no means a common occurrence; yet on looking to a table drawn from the bills of mortality, it appears that during the last thirty years the proportion of such deaths to births has been nearly one to one hundred.*

After some further unimportant remarks on the particular cases in which the forceps were used, the report closes with observing "that they continue to tie the umbilical cord as usual, in the manner in which the midwives are instructed." Such a remark would appear strange and unnecessary, were it not explained by stating that a work by a Dr. Ziernan has lately appeared in Berlin (1817), strongly reprobating the application of a ligature, and stating it to be the original cause of serious evils. This work, which is not only addressed to the profession, but also to midwives, and to the public at large, is announced by the professor as having dangerously misled several persons. An instance is related of the death of a child from hæmorrhage, which did not break out until thirty-four hours after birth. The navel-string had not been tied, and the midwife defended herself by referring to the above work, but added shrewdly, "that she did not think it quite right that medical men should so loudly recommend dangerous experiments to persons unable to judge of their value."

The details of some interesting cases which have occurred since the last publication, together with the remarks of Professor Nägele, close this interesting little pamphlet, which we cannot take leave of without expressing most strongly a wish that ere long we may see similar reports issue from our own hospitals, confident that such productions would most essentially advance the scientific character of this country, and the importance of the metropolis as a school of medicine.

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* See Med. and Phys. Journal, Vol. 25.

ART. IX. *De l'Influence des Efforts sur les Organes renfermés dans la Cavité Thoracique. Par Jules Cloquet.* Paris, 1820. pp. 66.

THIS little work, of which we shall give rather an analysis than a review, comprehends a variety of diseases and accidents, which have only an analogy so far as being produced by mechanical causes, and occurring in the viscera of the same cavity. Although, as a mere matter of arrangement, it would not be difficult to point out the incorrectness of such a ground of classification, its utility in a practical point of view is no less obvious; and we are not aware that any work has previously appeared in which the effects of violent exertion on the contents of the thoracic cavity have been placed in a distinct and detached point of view.

M. Cloquet commences his work by a consideration of three different modes in which the cavity of the chest is contracted; 1st. by the simple elevation of the diaphragm; 2d. by the simple depression of the ribs; and 3d. by these two actions combined. Omitting a variety of considerations which the author enters into respecting these actions, we will proceed immediately to the more practical part of the work.

First observation.—*A fistulous opening into the trachea, in consequence of a syphilitic ulcer.*—An old soldier of the train of artillery, who, after having retired from the service, exercised the business of a locksmith, came in the beginning of June 1814, to consult M. Cloquet for *angina tousillaris*, with which he had been affected for several days past. He had also a rounded fistulous opening at the anterior part of the neck and trachea, an inch below the larynx. This opening was caused by a syphilitic ulcer, which had destroyed the integuments, and several of the rings of the trachea; it admitted easily the extremity of the finger, and allowed the free passage of the greater part of the air which entered or was returned in respiration. The patient was in the habit of covering the wound with adhesive plaister, and during any violent exertion, as passing hardened fæces, coughing, &c. he was obliged to retain the plaister forcibly with his fingers. When this orifice was left open, the voice was almost entirely lost, and became more and more restored, in proportion as it was covered. Similar cases are mentioned by Petit, Richerand, and Magendie.

The muscles which close the glottis are found to be in fact antagonists to all the muscles of expiration, during violent efforts, and M. Cloquet observes, that this "aërostatic phe-

nomenon," may be reduced to calculation, by comparing the extent of the compressing surfaces, or parietes of the thorax with the column of air in the trachea, which represents the narrow base of the compressed fluid! This is thoroughly French.

When all the muscles of expiration are simultaneously contracted, the glottis being closed and the air retained, a violent compression is excited not only upon the viscera of the abdomen, but also on the contents of the thorax. This compression is observed by Mons. Cloquet to vary in degree according to the position of the trunk, and the different form of the chest in different individuals. "Herniæ of the lungs through the intercostal spaces, occur during violent contractions of the chest and abdomen, from cough, in lifting heavy weights, the efforts of child-birth, &c." Some observations follow respecting the state of the pleura, and the mode in which the intercostal muscles give way in these cases. The examples of this injury are rare. Boërhaave, Sabatier, Richerand, and Chaussier are cited as authorities; and the following cases are given by the author himself. The first occurred in a man of strong constitution, 45 years of age, at the Hôpital de la Charité. The tumour was elastic, circumscribed, flattened, one inch and half in diameter, not at all discoloured, and situated between the sixth and seventh rib on the right side, near the union of the bone to the cartilage. It was not painful on pressure, but sometimes severe pain occurred, together with cough, and a sense of oppression in the chest. Pressure of the hand reduced it, and its violence was diminished during inspiration—by forced expiration, cough, or other muscular exertion, it was much increased. It had been produced by a sudden exertion made in lifting a heavy weight. The patient was advised by M. Cloquet to wear a bandage with a cushion over the tumour, which kept it constantly reduced.

Case 2.—*Hernia of the lungs, in consequence of a wound in the parietes of the thorax, occasioned by the bursting of a piece of ordnance.*—In this case the sixth and seventh ribs had been fractured by the splinter, which also lacerated the integuments and muscles, to the extent of four inches. The greater part of the wound cicatrized after about eleven months, leaving however a fistulous opening, through which a copious discharge of serous fluid took place. Subsequently, when M. Cloquet saw him, a circumscribed tumour appeared on the right side at the lower part of the chest. It was reducible by pressure; it diminished in some measure by inspiration; it was much increased and hardened during expiration, and especially by coughing or other

exertions. Whilst it was reduced, the opening through which it passed was distinctly to be felt. No mention is made of the treatment of this case.

The next case is that of the occurrence of emphysema, in consequence of violent efforts in a laborious accouchement. It was during an extremely strong exertion, that a tumour was perceived between the two sterno mastoid muscles, immediately behind the superior extremity of the sternum. The tumour soon became distinctly emphysematous, and at length the neck and face were level with each other and puffed up in a frightful manner. The accouchement terminated naturally. An opening was made through the skin into the cellular tissue, and the air escaped—the patient recovered.

An interesting case is related by M. Flaubert, and transcribed by the author of this work, of rupture of the trachea and circumscribed emphysema, in a child of two years old, in consequence of violent cough. At the anterior part of the neck appeared a soft smooth tumour; it was compressible, semi-transparent, and not at all discoloured. On opening it by a T incision, a fistulous wound was discovered into the trachea, just below the cricoid cartilage of the larynx. It was cauterized with nitrate of silver, and the child was perfectly cured in ten days. The speech was not at all changed. Two striking cases of emphysema follow, one produced by cough, the other by violent vomiting. The latter case is interesting, and drawn up in a lively manner. A gendarme, aged twenty years, resolved upon self-destruction. He took some ounces of sulphuric acid mixed with brandy, and instantly after having swallowed it, threw himself into the water. This occurred about one o'clock in the day. He was taken out alive, and conveyed to the Hospital St. Louis. A dark-coloured matter was thrown from the stomach, with painful and violent efforts, which proved to contain a quantity of sulphuric acid. Milk was administered freely, but the vomiting continued violent. Towards evening he was more calm, the vomiting had ceased, and he was evidently better. Severe pains recurred, however, particularly in the bowels and stomach, and the patient expired about three o'clock in the morning. On opening the body, in the presence of Orfila, Dr. Biett, &c. amongst other injuries, emphysema of the lungs was discovered to have taken place, and the left lung was firmly attached to the parietes of the thorax. This emphysema was doubtless produced by the exertions made by the patient during submersion, and probably increased by the subsequent efforts made by vomiting.

When the air is forcibly retained within the lungs by the close of the glottis, and the chest is contracted in every direction whilst we are making violent efforts, the large blood-vessels in the chest and the heart are forcibly compressed. The latter organ is encumbered in its movements, it dilates with difficulty, and labours under the pressure with which it is surrounded. The consequences of these efforts often repeated, will naturally produce a sort of partial stagnation in the venous system, by the obstacle which is thus produced to the return of the blood to the heart; and a depletion, to a certain degree, of the arteries, from the less abundant, though more powerful, discharge of the blood into the aorta; and finally, the chemical change which takes place in the blood in the pulmonary circulation is rendered less complete by the continual renewal of the air being impeded.

An interesting case of pulmonic hernia of the stomach, or of part of the transverse arch of the colon (as M. Cloquet supposes), closes the volume, but nothing of a practical nature is to be deduced from it. It is believed that this hernia first of all passed through the diaphragm, and then made its way between the eighth and ninth ribs, at which part it appeared externally.

We are surprised to find that no mention is made of diseased heart, of hydrops pericardii, or of dropsy in the cavity of the chest, as produced by the causes to which this work is devoted. We cannot but think that the author might have discovered such, either in the course of his practice or his reading, especially as his attention appears to have been so particularly directed to such subjects. Upon the whole, however, it is a useful little book, and though less amusing than most of the productions of our neighbours, it has a more practical tendency.

ART. X. *Commentatio Ophthalmiatrica de Iritide Chronica ex Keratonyxide suborta. Auctore Henrico Brunone Schindler, Med. et Chir. Doctore, et in Schola Chirurgico-clinica Academiæ Vratislaviensis Medico Secundo.* Vratislaviæ, Holaenfer, 1819. 4to. pp. 50.

THE author of this Essay sets out by observing, that it is generally known that Buchhorn and Langenbeck were the first, who, by their observations on keratonyxis, raised the reputation of that new method of operating above that of all others; but that many succeeding inquirers, who made trial of the operation, by no means met with the same happy results. Employing the term keratonyxis in its original sense of punctio

corneæ, he goes on to enumerate the disappointments which these succeeding inquirers experienced. When merely reclined, the lens sometimes returned to its former situation, rendering the repetition of the operation necessary; sometimes its solution proceeded so slowly, that after the space of half a year, the lens still floated entire, in the eye, more or less disturbing vision; and in more unfavourable cases still, the eye was lost from iritis, closure of the pupil, and subsequent atrophy of the bulb.

Experience having demonstrated that the solution of the lens frequently required a long space of time, and in certain individuals could not be accomplished at all by nature, Professor Benedict, of Breslau, was led to abandon the method of merely dividing and breaking down the lens, and endeavoured in every case of keratonyxis to recline it. When the softness of the lens prevented its depression, he had recourse to comminution; and that being accomplished, he endeavoured to remove the capsule and the larger portions of the lens out of the axis of vision. Succeeding iritis, however, often disappointed the hopes which had been founded on the skilfulness with which the operations had been performed. The course of this inflammation appeared to differ so much from that of other species of iritis, that Dr. Schindler thought it worthy of particular investigation. He was still further led to devote his attention to the disease, from its occurrence in a patient on whom he himself had operated by depression; and he was excited to the inquiry by the repeated exhortations of Professor Benedict. Dr. Schindler has annually seen several cases of this disease both in the chirurgico-clinical hospital of Warsaw, and in private practice; and not finding an accurate account of it in any work, he has been led to believe that his time was not ill employed in describing it.

Dr. Schindler at the same time refers to several authors who probably had seen this variety of iritis, but without particularly discriminating it. In the seventeenth case related by Dr. Jaeger, in his Thesis de Keratonyxide, it can scarcely be doubted that the disease existed; but from the brevity with which the symptoms are related, it is impossible to decide that this was the case. Buchhorn also has related a case of iritis which seems to Dr. Schindler to come nearest to the new variety; but he has not described the essential phenomena of the disease.*

Dr. Schindler's Essay is divided into two parts; the first

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* Buchhorn, Die Keratonyxis, Magdeburg, 1811. Seite 18.

including a description of the disease, its diagnosis, aetiology, prognosis, and cure; the second, the histories of eight cases.

All the inflammations of the iris hitherto described, have been distinguished into idiopathic and sympathetic; the former set arising from surgical operations performed upon the eye, wounds, &c.; the latter from some constitutional disease, such as syphilis or gout. Both these genera are rapid in their progress. The kind of iritis described by Dr. Schindler differs from those just mentioned, not so much by its cause, as in its nature and course. He regards it as agreeing with them, only in terminating in closure of the pupil. From its length of duration, he has given it the name of chronic; and he distinguishes it not only from other iritides, but also from the long continuing external ophthalmia which is apt to follow the operation for cataract.

Owing to the eyes having been kept closed for several days after the operation to which this disease succeeded, pain was the earliest symptom observed by Dr. Schindler. He states that this generally comes on the first night after the operation; sometimes on the second, or on the fourth and fifth. He is not afraid of its accession after the tenth or eleventh day. The pain usually commences in the night or towards evening. When it becomes violent, it is seated deep in the eyeball, in the supraorbitary region, and in the forehead of the same side. It prevents the patient from sleeping, or rouses him from sleep. This Dr. Schindler regards as an important diagnostic mark; for when the pain is such that the patient can still sleep, we may rest assured that it is not chronic iritis with which he is affected. The pain continues without mitigation till day-break. Dr. Schindler has never opened the eye-lids during the first stage, being afraid of the sudden excitation from exposure; and he is therefore unable to describe the appearances of the eye at that early period. We cannot allow this to pass, without expressing our doubts, if not absolute disapprobation of the sealing up of the eyes practised in some of the continental schools, after an operation. Instead of mentioning it as an impediment in the way of an accurate examination of the state of the wound, and of the organ in general, we should be much inclined to regard this practice as one of the exciting causes both of this variety of iritis and of other inflammatory affections occurring in these circumstances. On this subject we earnestly recommend to the perusal of our continental readers, Sir Jonathan Wathen Phipps's excellent observations "On the Treatment of Patients after the Operation for the Cataract."

The first symptoms which have been observed in the eye by Dr. Schindler, are slight obscuration of the cornea, immobility and contraction of the pupil, and slight redness of the conjunctiva and sclerotica. The pain is moderate during the day, but towards evening returns with great violence, and disturbs the patient through the whole night. In the commencement the redness of the sclerotica is moderate, of a rosy tinge, surrounding the circumference of the cornea. The degree of conjunctivitis varies in different cases. At first, the rosy colour of the sclerotica shines through the conjunctiva; but by and bye the latter tunic becomes universally red, and the sclerotica is then no longer visible. In a few cases, Dr. Schindler has observed severe external ophthalmia, but never chemosis.

The cornea is more violently attacked. It is observed to lose its peculiar splendour, and to become universally cloudy. If this obscuration proceeds to its utmost degree, the cornea becomes yellowish on its internal surface, and at the same time, the aqueous humour seems turbid and whitish.

It follows from this obscuration of the cornea and aqueous humour, that nothing certain can be said of the state of the iris. From the commencement, the pupil is motionless, contracted, and generally drawn to an angle at the superior or inferior part of its margin. Whether the colour of the iris be at this period changed, cannot be determined. Dr. Schindler has never seen the iris inclined forwards, so as to abridge the anterior chamber. Towards the end of the disease, the margin of the pupil appeared to be turned backwards.

During the progress of the disease, the eye is affected with considerable intolerance of light and lacrymation. The invariable effect of the disease is to limit vision very materially, even when the operation from which the inflammation took its rise is successful.

All the symptoms increase for five or six days; and under every paroxysm of pain the disease makes progress, till the anterior chamber seems to be filled with a pale and slightly yellowish cloud. The decrement of the disease is very slow. The pains in the head and eye diminish, but return at irregular intervals, through the day and night. Sometimes they are absent for a night, but return the succeeding one with new violence. The appetite is lost, the digestive organs become deranged, and the patient suffers under general febrile symptoms. The cornea and aqueous humour gradually become clearer, so that the iris can be seen. It is usually several weeks before the cornea returns to its pristine splendour and clearness.

The effects of this disease are arranged by Dr. Schindler, in three classes, according to their degrees of severity.

1. If the inflammation has been treated in a proper manner, at its commencement; if the inflammatory diathesis has not been great; if the constitution has been good, and not deranged from previous disease,—the pupil is considerably contracted, motionless, angular, and its margin turned back into the posterior chamber; the colour of the iris is not changed. From the continuance of the inflammation, neither the influence of light, nor the application of extract of hyopamus, is able to excite the slightest motion of the pupil. The inflammation diminishes with the intolerance of light, and the cataract having in the first instance been happily depressed, the patient begins gradually to see the objects around him. If the lens had been merely divided, the pupil is for a time filled with the remains of the cataract, and vision is very obscure. But by and bye a black point appears in the upper or middle part of the pupil, indicating an increased absorption, by means of which the patient's sight daily improves.

2. The termination of this iritis is not always so favourable. If it has been neglected, if from any cause there has been a predisposition to inflammation of the eye,—delicate white filaments are observed in the angles in the pupil, which is narrowed, motionless, and distorted. The nightly pains still return, although not so frequently. The lesser circle of the iris is changed in colour. The chronic inflammation remains for weeks. The sight is much more limited than in the former case. Still there is hope that the absorption of the lens and of the lymphatic exudation may restore vision.

3. In the third class there is a still greater degree of contraction of the pupil. When the aqueous humour and cornea become clearer, the contraction is seen to be increasing. In the end, the pupil remains about the size of a pin's head, and is filled with exudation; the patient is able merely to perceive light; the iris is retracted, so that the size of the anterior chamber is increased.

In his third chapter, Dr. Schindler has entered into an elaborate account of the diagnosis of this variety of iritis.

Acute idiopathic iritis may take place from the first to the tenth day after the receipt of the injury by which it is excited. It is attended from the commencement by violent pains in the eyeball and forehead. These pains continue day and night, with greater or less violence, but never completely cease, or observe a nocturnal type. Chronic iritis, again, commences from the first to the fifth night after the operation. The pains occupy

the forehead chiefly; they are usually most severe during the night; through the day they are either absent altogether, or recur with less violence and at longer intervals.

The external opthalmia in acute traumatic iritis is more severe, and after some hours or days it often increases to the most violent chemosis. In chronic iritis, on the other hand, the external ophthalmia amounts to no more than a slight taraxis.

The cornea, in acute traumatic iritis, unless where it passes into suppuration, continues clear and pellucid, and never prevents us from seeing the iris. But in the disease described by Dr. Schindler, there is invariably a uniform obscuration of the cornea. Suppuration, either at the wound made by the keratonyxis or in the rest of the cornea, has never been observed in this variety of iritis.

The iris, in the first stage of the acute iritis, is immovable, and equally contracted, so that it retains its circular form. The colour of the iris is changed, so that if blue or grey it becomes green, if brown it becomes red. The iris swells, and either advances towards the cornea or is drawn back towards the lens. In the second stage, the pupillary margin of the iris becomes angular, and is more or less filled with slender white filaments. In acute iritis, we see hypopium take place, or an abscess form in the iris, which bursting pours its pus into the anterior chamber. Now indeed the cornea becomes obscure, and its internal surface yellow; it is destroyed from the contact of the purulent matter, and in very bad cases bursts. Sometimes pus mixed with blood, the remains of the lens, and portions of the vitreous humour, are evacuated. In other cases, inflammation and suppuration taking place on the surface and between the laminæ of the cornea, its cohesion is lessened, and either staphyloma follows, or the centre of the cornea giving way, a hernia of the iris forms. All this is very different in the chronic iritis. From the very commencement of the disease, the pupil is contracted and distorted, especially in its lower edge. The colour of the iris is scarcely changed. Along with the inflammation there takes place unnatural secretion of the aqueous humour, which is more or less turbid, whitish, or yellowish, and instantly veils the iris from view. This turbidness of the aqueous humour it is impossible to confound with hypopium. On the aqueous secretion becoming natural, the iris is seen not to be discoloured, but its papillary edge to be drawn back; white filaments begin to appear, and this state of the organ remains unchanged for a great length of time. The pupil becomes more and more narrow for the space of several weeks, the exudations increase, and after a

still greater length of time the pupil closes, unless the inflammation be subdued, and the synizesis prevented by medicine.

Those of our readers who have gone along with us in our ophthalmological criticisms, will not require that we should enumerate in this place the diagnostic symptoms of arthritic and syphilitic iritis. They are too palpable ever to permit those who have studied in the German school, or who have even only perused with care what we have said on former occasions when the works of Schmidt and Beer were before us, to confound these diseases with that described by Dr. Schindler.

Dr. Schindler regards the disease, which he calls chronic iritis, as requiring the most efficacious and strenuous antiphlogistic treatment. If this be employed in the first stage, the disease is completely dissipated, or at least its course shortened, and its violence greatly diminished. If nothing contra-indicates venesection, this is the chief remedy to be employed. Topical bleeding is also to be had recourse to, especially if any circumstances of the case forbid general bleeding. Mercurial ointment, with opium, is to be rubbed in over the forehead. This is the remedy which most effectually and speedily relieves the pain. Internally, from one to two grains of calomel are to be taken every hour, or every two hours. This remedy is to be used either by itself or mixed with extract of hyosciamus, and is to be continued as long as the pains are violent, especially if the obscurity of the aqueous humour and cornea is at the same time increasing. Good effects may be derived also from the employment of an emulsion, containing nitre and aqua lauro-cerasi. Blisters are to be applied to the back of the neck, and to be kept open. Sinapisms also are to be applied to the calves of the legs. The eye itself, during the first stage, is unable to bear any external application. All remedies of this kind are found to increase the pain.

In the second stage, the active antiphlogistic treatment is to be laid aside. Calomel is still to be given, but in less doses, to excite the absorbents. Blisters are to be continued. Infusions of valerian, angelica, calomus aromaticus, and bark, are found useful. The eye now bears some external remedies; and a solution of the extract of belladonna, or of hyosciamus, may be applied over the whole affected side of the face with great advantage.

In the third stage, when the pains are milder and the cornea clearer, but the contraction of the pupil and the lymphatic exudations increase, blisters, and the solution of belladonna, or hyosciamus, constitute the chief remedies recommended by Dr. Schindler.

We have thus given a pretty minute analysis of the work before us. With some of Dr. Schindler's conclusions respecting the choice of an operation for cataract, we cannot agree, but we recommend his Essay to the perusal of our readers. It is written in the true spirit of the German school of ophthalmology; the spirit of minute, patient, and accurate investigation; a spirit which we were in hopes had begun to spring up in England. Certain recent works have blighted these hopes —but more of this hereafter.

ART. XI.—*Des Prisons telles qu'elles sont, et telles qu'elles devraient être; ouvrage dans lequel on les considère par rapport à l'Hygiène, à la morale, et à l'Economie politique. Par Louis-Réné Villermé, Docteur en Médecine, Membre de la Société de Médecine à Paris, de plusieurs autres Sociétés Médicales, &c. &c.* Paris, 8vo. 1820.

PRISONS (from pris, taken; formerly, gaol; from the Greek γῆ, earth; or from the Latin geola, gaola, cage) are places in which are confined the guilty, the accused, and those whom the reverses of fortune have subjected to the will of others.

The origin of prisons is lost in the darkness of antiquity. There are no traces of them in the sacred writings before the chapter of Genesis, which says that Joseph was put in prison, although innocent of the crime of which the wife of Potiphar had accused him; but there is frequent mention of them afterwards. The writings of the Greeks and Romans occasionally speak of them, but it was only under the Roman emperors that they became common. Prisons were hardly known at Athens, at Sparta, and at Rome during the times of the Republic. During "ces beaux siècles de la Grèce et de Rome, qui ont été ceux de la gloire et des prodiges de l'esprit humain,*" nothing was so dear to the State as the liberty of her citizens, and the accused enjoyed freedom till the moment of their condemnation. It does not appear that prisons were often employed in France during the first period of the monarchy, nor indeed in other countries of Europe, where accusations were generally decided by fine, judicial combat, trial by fire, &c. In those ages of barbarism they were only employed for prisoners of war.

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* La Harpe.

The object of M. Villermé's work is to examine into the present state of prisons, and he particularly directs his views to the health and morals of those confined in them. "Such as prisons now are, they present to the moralist, the physician, and the man of the world, one of the most curious, grand, and tragic pictures that can be conceived; in their walls the jurist and legislator may study the influence of circumstances upon our inclinations, and gather a multitude of ideas on the means of giving rise to the social virtues in mankind."

Our author first considers buildings serving as prisons, and under this head he remarks, that salubrity of situation is the point which has been least considered in buildings devoted to purposes of justice. In garrison towns prisons are always situated on the banks of damp ditches; in other cities, ancient castles, edifices with thick walls, which are always covered with humidity, old towers, and obscure vaults, are usually chosen for this purpose.

Construction and arrangement.—M. Villermé is of opinion that, with very few exceptions, prisons, all over Europe, are deficient in their construction and arrangement. At Boulogne-sur-Mer, the cellars of the citadel, which are used as a prison, were visited some years ago by M. Villermé. One of these cellars, about five fathoms long and four broad, contained about twenty military prisoners, who had not been out once for many months. It was only lighted, if the word be applicable, by a vent-hole eighteen inches long. At Lyons, the cellars of the town hall are likewise used as the prison, the same as at Fontainbleau. Other prisons might be referred to in France, Spain, Germany, and England, but two examples will be enough. M. Villermé gives as one the prison at St. Albans; as the other he refers to Fort Royal in Martinique, where the prison is a dungeon formed in the masonry work of the turret of that fortress, and having no other aperture than a hole of a few inches' size in the door, through which the air from a long subterraneous staircase enters; the walls are covered with damp; and insects, only differing from each other in their capability of injuring, destroy all they cannot devour, and cover with their bodies the water allotted to the prisoners.

In several of the prisons of France; Auch, Pau, Limoges (1808), and the prisons of the police in Paris, for example, there is no court to afford air and exercise to the prisoners. In such cases these unfortunate beings never quit their chambers to enjoy the sun or breathe the air; and may consider themselves fortunate when they are not immediately under the roof, where the heat is stifling during summer, and the cold excessive in

winter; or in damp dungeons, as at the Conciergerie at Paris. In the latter prison there is indeed a court-yard, but the prisoners are not allowed to walk in it, or when they are, it is only for a few instants. Indeed in the prisons which have courts, these are generally so small, so sunk, and with such high walls, that they may be compared to a sort of well. Thus the small court for children in the house of correction of St. Denis, and the one destined to the sick in the prison of St. Pélagie, are a perfect mockery in the eyes of those who reflect that they are assumed to be devoted to the recovery of the health of those confined within their limits. The last-mentioned court, which is surrounded by walls, is fifteen feet long by ten broad *.

Another defect in the construction of prisons is the smallness of the windows, which (when there are any) are so small and so high that the sun can never penetrate. Sometimes, as at the Conciergerie of Paris, they are over the door; or as in the tower of St. Pierre at Lisle, they are cut in a wall eighteen feet thick; or as in many French prisons they are so blocked up externally, that from this cause, and from the humid exhalations arising from their bad situation, it is impossible to see to read and write before twelve o'clock. This is the case in the ground floor of the Maison d'Arrêt of Versailles. Even these miserable windows are often rendered nearly inaccessible to light and air, by the idleness of the jailors, who, to save themselves trouble, have in many prisons blocked or walled up two-thirds of them.

The effects of a residence in such prisons may be easily anticipated. Rheumatism, diarrhœa, obstinate catarrh, atrophy, anasarca, &c. are constantly induced in those who have entered the prison in a perfect state of health. Individuals have often died of diseases thus contracted, after being acquitted of the crimes laid to their charge;† or in some cases the day before their innocence was recognized. In several volumes of the "Statistique Générale de France," there is mention of frequent epidemics in prisons, and of diseases extending from them.

M. Villermé gives the following description of the Prison of the Police in Paris—one, he observes, where no inhabitant of Paris can promise himself never to be confined.

"There is, (says M. Henry Goultier-de-Claubry, in a note which he has communicated to me,) in the Prison of the Police, chambers of

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* Rapport à son Exc. le Ministre de l'Interieur, etc. par M. Al. Delaborde.

† See F. E. Foderé, Traité de Méd. Legale et d'hyg. publiq.; J. Howard, &c. Les Statistiques des départemens de l'Ain, de la Haute-Vienne, &c. &c.; Réflexions sur l'etat actuel du jury, &c. &c. par M. Coffu, Paris, 1818.

'detenus,' called the 'Salle St. Martin." They are situated under the roof, and are small enough; they contain three or four beds, and are not aired; they have no windows, but there is a chimney towards the middle, or rather the end, of one of the rooms, having in its upper part a small hinged window, which, however, cannot be opened wider than six inches. The sun strikes with full force upon this chamber; the air is never renewed, for the doors only remain open whilst any one enters the room. The exhalations from individuals thus confined together, and the smell of food, all contribute to the insalubrity of the air; but what is still more hurtful, there is a close-stool in each room, which is only emptied every twenty-four hours. What shall we say of the rest of the prison, when it is known that we have here described the chambers of those who pay for being less badly off than the others."

Thus, at the end of the nineteenth century, as at the end of the eighteenth, the assertion of Howard is proved, who said that means had been found of depriving prisoners of air. Such is the origin of typhus, that scourge of prisons, called often jail fever.

After these introductory remarks on the present state of prisons, M. Villermé proceeds to describe what they ought to be. He remarks that the essential points in the construction of prisons are, convenience, morality, and salubrity. He confines himself to the examination of the latter of these points. A prison should be built on a dry, airy spot, but near, if possible, to a river or spring capable of furnishing plenty of good water. The building itself should be large. The great error in the construction of prisons is their being originally too small. Perhaps the best calculation would be to construct them for a third more than are on an average ever confined in them. This will not be overrating the point, particularly if we consider the variable population of a prison. The first indispensible step towards the amelioration of prisons, is to construct them so as to allow the classification of those confined—the separation of the sick from the healthy, and the division of apartments into dormitories and working rooms. Large well-paved courts, partly planted with trees and provided with sheds, ought to form part of every prison. The apartments should be dry and airy; hence, probably, arcades under the building are preferable to sheds; they are also, as was observed by Howard, more secure, as the greater number of escapes from prison have been effected by undermining the chamber or dungeon.

One of the most efficacious, easy, and least expensive methods of promoting the salubrity of prisons is to multiply the number of windows; below the windows is perhaps the best place for ventilators: this has been very advantageously put in practice

in the dormitories of the house of correction of St. Denis. M. Villermé differs from Howard in regard to the construction of windows. This eminent philanthropist was of opinion that there should be no glass in the windows of prisons, but that they should be narrow, and stopped up with straw at night. This recommendation is evidently inapplicable, except in very warm countries, and during summer. Under all circumstances the windows should be arranged in such a manner as to preclude the possibility of the prisoners conversing with one another. The doors of the dormitories, and of the cells of the condemned, should be simply iron bars, to promote a free circulation of air, and to afford the keepers in the corridors the means of constantly ascertaining the security of their charge. Where this plan is not pursued, there ought at least to be iron wickets in the doors. Each prisoner should sleep separately. The proper construction of staircases, corridors, &c. is equally conducive to the healthfulness of prisons. The building itself should be always detached from every other house, and surrounded by a wall, between which and the prison there ought to be a broad open road; a wall built in this manner most completely isolates the prison, ventilates it, facilitates the means of watching it, and renders the escape of prisoners more difficult.

As to dungeons, M. Villermé views them as monuments of feudal barbarism, and censures severely the Prison of the Police at Paris, and the dungeons of the Bicêtre in the same capital. As an example of the ignorance displayed in the construction of prisons, our author states, that in the vast and beautiful abbey of Loo, near Lisle, which is now converting into a prison, they have commenced not only by walling up the lower part of the windows, and pulling down the cloisters to make large dormitories, but have actually commenced digging cellars for dungeons. M. Villermé remarks that the prisons of Gand, St. Lazarre, at Paris, &c. derive their salubrity from their size and construction.

There is one circumstance too little attended to in prisons, and which is a fruitful source of infection, i. e. want of privies. M. Villermé alludes to a new plan of a M. Cazeneuve, which has been adopted in several hospitals, for removing the offensive smell of privies by means of pipes of heated air.

Dress and Beds.—In all well-administered prisons, linen and clothes are furnished to the prisoners. They receive generally a clean shirt every Sunday; their clothes form a sort of uniform. As to the "detenus," they only receive clothes when necessary.

In France, the clothes furnished by the administration are,

for the men,—1. A waistcoat with sleeves, and pantaloons of the same colour, red lined with black. 2. A cap of the same cloth. 3. A pair of woollen and a pair of thread stockings.—For the women,—1. Two petticoats. 2. A corset with sleeves lined with cloth. 3. A handkerchief and a cloth cap. 4. Two pair of stockings. These are renewed every two years, and a pair of wooden shoes are given every two years.

In the prisons of Paris great attention appears to be paid to the dress of the prisoners; the same is the case at Melun, but it is by no means generally so in France. M. Cottu, who is well known by his work on the criminal law of England, thus speaks of the prison of Reims—we do not attempt to translate this shocking picture. "Oserai-je dépeindre ici le spectacle affreux qui s'offrit à mes regards à l'ouverture d'un dernier cachot? Je crois me sentir encore suffoqué par l'horrible puanteur qui se précipita au dehors aussitôt que j'y entrai. Je jetai les yeux sur sa noire profondeur et je ne decouvris qu'un amas de paille infecte, sur lequel je n'aperçus aucun être vivant. Le dirai-je? à ma voix dont je m'efforcai de rendre l'accent doux et consolateur je vis sortir du fumier lui-même une tête de femme, qui n'etant qu' a peine soulevée, m'offrit l'image d'une tête coupé, jetée sur ce fumier: tout le reste du corps de cette malheureuse étant enfoncée dans l'ordure, et ne pouvait s'apercevoir. En vain je voulus apprendre de sa bouche le cause de sa détention il me fut impossible de m'en faire entendre..... Je fus obligé de chercher près du geolier les renseignemens que je demandais, et j'appris que cette malheureuse avoit été condamnée pour vol, et que le manque des vêterneus l'avoit contrainte à chercher dans son fumier un abri contre la rigueur de la saison."* Even at the Bicêtre, during the months of January, February, and March, the prisoners are sometimes seen half dressed, without shoes and stockings, and what is the consequence? One tenth of the prisoners are always in the hospital of the prison, labouring under scurvy, scrofula, fevers, rheumatism, and particularly pulmonary consumption. M. Villermé states, that some years ago, scurvy committed dreadful ravages in the prisons of Paris, and that it diminished as soon as the prisoners were supplied with linen; another proof of how closely humanity is connected with economy.

Beds.—In the prisons of Paris, the accused and healthy pri-

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* Reflexions sur l'état actuel du jury de la liberté individuelle et des Prisons, in 8vo. Paris, 1818. p. 171.

† Rapport au conseil général des prisons dans scéance du 25 Mai, 1819. p. 5.

soners have a straw bed, a blanket, and bolster. The condemned have, in addition, a mattrass and a pair of sheets, which are changed every month. These are placed either on wooden bedsteads about three feet wide, or on a sort of camp bed. The distinction in the beds of the accused, who may very likely be innocent, and the convicted prisoner, is extraordinary and unjust. The reason given is, that the beds of the condemned cost nothing to the State, because their labour pays for them ! ! !

There is an additional allowance of bedding to the old, infirm and sick. In the prisons of the police, the prisoner cannot have a clean bed, even at his own expence, without the permission of the police, to obtain which takes several days. But these remarks only apply to a very few well regulated prisons; for, in almost all, the general directions given for preserving cleanliness are disregarded. The bed consists of a little straw and one miserable covering, serving for three or four individuals. In many of the towns in the south of France this is the case. At Lyon, in the prison of Roanne, those who have not the means of paying for their bed, sleep upon straw, which is renewed every ten days ; but, by an inconceivable abuse, any prisoner who chooses to sleep upon his old straw may sell his allowance of new to the jailor for two sous; thus in M. Cottu's account of the prison at Reims, the prisoners were sleeping pêle-mêle upon straw which had become dung. M. Villermé saw the same dreadful spectacle at Boulogne-sur-mer. In the criminal prison of Vienna, the prisoners sleep upon boards, without mattrass or covering; during winter only they are allowed a blanket.* In France, the prisoners sleep two together, with the exception of those in the house of correction for children, and debtors. This practice ought to be done away with.

It is, of course, extremely difficult to keep the prisoners clean. Independently of the disadvantages of lodging and dress, grief renders them indifferent to the care of their persons, and a multitude of diseases are the consequence. They should be obliged to wash themselves frequently, the hair should be kept short, and they should be frequently shaved. They should be examined in the same manner as soldiers are inspected. The habits of cleanliness which a soldier is obliged to acquire, are conducive to sobriety, love of order, and extinguish many physical and moral vices. Cleanliness has well been termed a semi-virtue.

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* Voyage en Autriche, par M. C. Cadet de Gassicourt. 8vo. Paris.

The prisoners on their first admission should go into the bath, and continue this practice at least once a month. In the house of correction at St. Denis, this is put in force. M. Haguette, the physician to this establishment, has had a large tank constructed, capable of holding ten persons, and in this the prisoners wash themselves winter and summer, in hot or cold water according to the weather. The prisoner should be stripped of his old clothes, and all hair shaven off his body, to prevent the introduction of vermin.

Warmth.—In the greater number of French prisons, no fire is allowed, or it is too trifling to be of service. In the first case, the injurious effects of cold are increased by acting upon persons badly fed, clothed, and dressed; they assemble together in great numbers, in one room, to keep themselves warm by their breath. In the second case, they likewise crowd together in one room, and equally infect the air they breathe. The accused prisoners appear, by M. Villermé's account, to be worse off than the condemned in this respect. The prison of Philadelphia, we believe, is the only one where the prisoners in their cells receive by means of artificial heat all the advantages of fire, without the power of abusing them.

M. Villermé commences his chapter on the diet of prisoners, by properly condemning the practice which exists in some parts of England, of giving money instead of provisions. He then gives an account of the quantity of food allowed in the prisons of England, and asks, with great justice, how it is reconcileable with common principle, that in a country living under the same laws, the prisoners of one part of it should be starved to death, and in another superfluously fed.

In France, the prisoners never receive an allowance of money instead of food. With regard to diet they may be divided into the following classes:—1. Those who are not obliged to work, and do not work, that is, those who are merely confined on suspicion, and not brought to trial, are allowed 1½lb. of bread, which has been twenty-four hours baked, water, and a pint of Rumford soup. The bread, at Paris, is directed to be made of flour composed of three parts of wheat and one of rye; in other parts of the country it is half wheat and half rye.

2. The condemned, who are obliged to work, but who refuse to do so, receive only bread and water.

3. The condemned who are willing to work have the usual allowance of bread, and on Sundays and Thursdays receive in addition a pint of broth and four ounces of boiled meat without bone. On the other days of the week they have broth,

which is more nourishing than the Rumford soup, with vegetables.

4. The infirm and aged have the same allowance as the third class; the bread entirely wheaten, and it is reduced to 1lb.

5. Women suckling their children receive 1½lb. of white bread, ½lb. of boiled meat without bones, broth, and a small quantity of wine and milk for their children.

6. The children under nine years of age have ½lb. of bread, and fare as class 3.

In the prisons of Paris an additional allowance is given, on the requisition of the physician; but this is not general in the French prisons. M. Villermé thinks the proper allowance of bread would be 28 to thirty ounces for men; at Gand it is 26, and at Melun 28 ounces. At Tours, Poitiers, and Angoulême, and in the greater number of the prisons of the south of France, the prisoners have 2lbs. of bread, but no soup. It is not generally expected, and when furnished it is given by charitable associations. At Béziers a humane individual, a M. Salvant, has distributed soup to the prisoners of that town for the last thirty years.

The Society of Medicine of Paris came to the conclusion, by a report published in 1791, that the allowance of bread should be 2lbs. for each prisoner. M. Villermé recommends the addition of vegetables, as the food is not sufficiently succulent.

The quality of the water is very important. It ought never to be kept during summer in buckets or pails, where it soon spoils, but in earthen jugs. The prisoners should dine together in one particular room, and not eat when they please, for they often gamble away their allowance; the food too, by being kept in hot dirty rooms, soon spoils. The plan of causing the prisoners to dine together at one table, has been introduced in the prison at Melun, by the Prefect of the department, Count Germain.

There is nothing more unjust and cruel in the economy of the French prisons, than the difference of treatment which the untried and convicted prisoners undergo. We have already observed, that in point of bed and dress, the former are infinitely worse off than the latter. The same in respect to food. The strength of the untried prisoner, who cannot work because he must occupy his time in preparing for his trial, and because he has not had time to learn the trades carried on in the prison, fails every day; and when he is set at liberty, he is no longer able to pursue his ordinary occupation. If innocent, he has deserved no punishment, and yet he has undergone a severe

one, which is continued to his family, whom he is no longer able, with injured health and diminished strength, to support with his labour. If the allowance of bread be not always sufficient, when of good quality and weighed by disinterested hands, how inadequate must it be when those whose business it is to examine into the state of the food, are negligent and inattentive to their duty, or who depend on others for the faithful discharge of it. According to M. Fodéré,* the Rumford soup is not sufficiently substantial; many prisoners prefer dry bread.

In those French prisons where the practice of working is not introduced, (and this class comprehends by far the greater number,) the diet of the prisoners is confined to bread and water. M. Villermé regrets that the gelatina extracted from bones does not form part of the food of prisoners. The process, he observes, is easy, and a few vegetables and seasoning render it fit for digestion. The advantages of this substance, as an article of food, have been proved in 1815 and 1816, when the poor of the city of Geneva, and a part of Switzerland, owed the preservation of their health to it, when they appeared likely to die of hunger.

The abuses which exist in articles sold to the prisoners by the keepers, have often been pointed out. M. Villermé states, that in one prison of Paris the keeper has established a canteen, where things are sold to the prisoners at a fair price. The canteen, however, should be under the charge of a person unconnected with the prison. There is a still greater abuse often committed, which is, allowing the keeper or jailor to contract for the bread furnished to the prisoners. The comfort of the latter depends so much on the keepers, that they never dare complain in case of fraud. In the report lately made to the king by M. Lainé, it is stated that there are still prisons where the keepers prepare and distribute the food. In Paris this is not allowed.

In Pennsylvania, New York, Virginia, Massachuset, Connecticut, and many other parts of America, the food of prisoners is restricted to what is absolutely necessary, but it is wholesome, clean, and in sufficient quantity. The breakfast consists generally of Indian corn flour, boiled with water and molasses, or three-quarters of a pound of bread with molasses. The dinner of half a pound of meat, vegetables, and half a pound of bread. The supper of rye or Indian corn flour, and sometimes boiled rice. The prisoners eat at one table, and not

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* Traité de Méd. Légale d'Hyg. Publique.

in their own rooms, as in all the other prisons of Europe. Each takes his place at table, and finds his portion on his plate. Silence is strictly observed. No food is permitted to be introduced into the prison, nor is any other drink allowed than water. The object sought in thus keeping them from strong and fermented liquors, is to lower violent temperaments, to modify the moral character, and to change the whole range of ideas.

Our author, in alluding to the manner in which prisoners are treated in America, observes, that however he may concur in the restriction on fermented liquors, yet that while prisoners are treated as harshly as they are in Europe, an occasional use of beer is requisite. He gives a very striking picture of the effect of habits of order and labour in diminishing the desire for fermented liquors. In the prison of St. Lazare at Paris, where there is generally from 6 to 700 women at work, and who consequently have the disposal of a little money, there is not consumed more than two or three measures of wine, and a few glasses of brandy a day. In the house of correction of St. Denis, on the contrary, nothing is so common as drunkenness. In this prison, chronic enteritis and gastritis are common complaints. M. Villermé is decidedly of opinion that the use of strong liquors is improper.

Sleep.—In the best regulated prisons of France, the prisoners rise at five in summer, and seven in winter, and they are shut up in their dormitories at eight in summer, and still sooner in winter. In those prisons where labour is not introduced, and where prisoners are confined to cells, they can sleep during the day, so that on the whole they have as much or more sleep than is necessary.

Want of bodily exercise—Idleness.—The prolonged privation of motion and bodily exercise in the open air is a frequent cause of disease, particularly in those confined to a dungeon. Reflexion, grief, and the love of rest add to the effects of this privation, which is the more pernicious, in proportion as the previous habits of the patient have been active. These effects soon appear in the shape of weakness, loss of appetite, bad digestion, &c. and subsequently scurvy. Bodily exercise being almost incompatible with the nature of a prison, it is the defect most difficult to remedy.

In speaking of the effects following a state of absolute rest, M. Villermé gives the case of a man who was accustomed to take very long walks, and whom M. Villermé had occasion to see eight months after he had been thrown into prison. Confinement had produced a dropsy of both articulations of the

knee. This disease did not appear to be the effect of gout or rheumatism. The man died, and on dissection, an extraordinary collection of synovia was found in the articulations of the lower limbs, and particularly in those of the feet with the leg.

Want of bodily exercise and idleness have a close and necessary connection; and we have frequent opportunities of observing in prisons, the dreadful effects of idleness on the body and mind. It soon paralyzes the mind, degrades the feelings, destroys good habits, and induces a degree of melancholy under which many sink. It has been said, that idleness is the mother of all vices; it might have been added, that it is the parent of many diseases: for it renders the organs of the body much more susceptible of morbid action.

We regret that our limits will not allow us to follow M. Villermé in his interesting remarks on the Labour, Recreations and Repose of Prisoners. The ninth chapter is entitled, "Usages suivis dans la plupart des prisons, ou du moins dans un très grand nombre d'elles, et qui ont la plus nuisible influence sur la santé et sur le moral des detenues." Our author commences by discussing the question of dungeons, chains, fetters, torture, corporal punishment, &c., of all of which he strongly disapproves. He then proceeds to some general reflections upon the moral effects of imprisonment. These effects, which quickly influence the physical powers of the prisoners, vary in proportion to the circumstances and sentiments which predominate amongst the prisoners. Thus the moral effects of imprisonment are different in the man who was happy in the bosom of his family, and in him who was a stranger to domestic happiness —in the merchant who sees ruin in his imprisonment, and in the wretch who has nothing to lose; in the man of honour, hurried by the passion of the moment into a crime, and the wretch hardened to every species of wickedness. Now, though situation produces different mental effects on each of these, yet being placed in similar circumstances, the physical effects are the same; thus, loss of appetite and disorder of certain functions are the first symptoms observed. What individual could be so devoid of feeling as not to experience great dejection of mind when first thrown into confinement, and thinking of the friends he has left, the society he has lost, and the companions he is forced to mix with. This dejection will produce debility, which is followed by scurvy or typhus, and under all circumstances, hypochondriasis is an invariable companion of this state. Prisoners with loss of liberty soon lose elevation of sentiment and energy of soul; they fall into a state of stupid apathy, and become indifferent to the lot of others—almost to

their own. This dreadful state of mind, with grief, melancholy and nostalgia, which destroys so many prisoners, are the ordinary effects of long imprisonment.

When a person accused of any crime is thrown into prison, in France, he is what is called mis au secret, i. e. put in a cell, where he is cut off from all communication with any living being till he has been interrogated. The utility of this measure cannot be called in question, but it ought not to be prolonged beyond a few days. In France, however, it lasts for months, and, according to Bérénger, an individual has been kept "au secret" 372 days, and one 552 days. So terrible is this state of torture,—for its object being to elicit confession, in what does it differ from the ancient practice of torture?—that M. Villermé has heard, from all those accustomed to prisons, that four months of it are sufficient to induce despair and mental alienation. What is known of those confined in the Bastille in former times confirms this observation, which will not appear extraordinary if we remember that during this time the prisoner is deprived of the privilege of reading or writing. There is a most interesting account extracted from M. Bérénger's book of the effects of the "secret" on the mind. It is the answer of an accused prisoner to a judge who pointed out some contradictory points in his answers. The prisoner recapitulates all he has suffered: solitary confinement for 101 days—no food for the first fifty hours of his confinement—the various examinations he had undergone—when torn from his bed at midnight—when fainting for want of food, &c. &c., and then asks how his answers can be consistent.

It has been universally observed in prisons, and M. Villermé confirms the fact, that the constant state of anxiety experienced by prisoners produces palpitations of the heart, which, renewed and excited on the least recurrence of the circumstances which produced them, give rise to aneurism of the heart and aorta. Hardened villains, or stupid dull people, never labour under these palpitations. The physical effects produced on prisoners by joy, on being declared innocent, are well known. Death has frequently taken place on the spot. A more common effect is a fit of suffocating asthma in men, and severe hysterical affections in women. A person will bear a long imprisonment with patience and resignation, but when the period of confinement has nearly elapsed, the desire of liberty becomes so strong as to produce severe disease. A very interesting case of this nature is given. A man of ambitious mind, in order to secure a large fortune, had recourse to means which threw him into prison for eight years. The director of the prison to which he was sent

was an old college friend, a man of sense and feeling, who having often had occasion to observe the effect of labour in drawing the mind from the contemplation of its own misery, assigned his unfortunate friend some little domestic charge. Flattered by the confidence shewn, he applied himself diligently to his duty, which he soon found a pleasure, and passed the great part of his term of imprisonment in happiness; never making the least attempt to escape. The last five months of his confinement had now commenced; he became uneasy, restless, and agitated, sighing often, and occasionally speaking of his approaching deliverance. He became thin and feeble; and when only one month of the term remained, he forsook all his usual occupations—he neither slept nor eat—his strength failed, and his health was dreadfully impaired. At last the day arrived, and when, almost in a state of delirium, taking leave of his friend, he acknowledged that during the last month he had often been tempted to escape from prison, which had never occurred to him during his long imprisonment.

M. Broch d'Hotelans, who has established perhaps the best prison in France (La Maison Centrale de Détention de Melun), has often observed prisoners, who have borne a long confinement with resignation, die of impatience when they had nearly arrived at the termination of it.

M. Villermé gives a most frightful, but we fear not overcharged picture of the depraved and unnatural desires which usurp the place of sexual intercourse in prisons, from the prisoners sleeping together. In a medical point of view, these produce phthisis, stomach complaints, muscular weakness, debility of sight, and of the intellectual faculties.

Our author then proceeds to the best plan for ameliorating the present state of prisons. The first and most essential point he considers to be division and classification, and gives a table of the method in which he would carry them into effect. We are reluctantly obliged, from want of room, to pass it over, as also several other methods, equally judicious, and which are discussed with a union of humanity and knowledge which do M. Villermé great credit. We pass on therefore to the subject of diseases.

The number of diseases depends, cæteris paribus, upon the population and management of the prison. There are many prisons in which the scorbutic and cachectic air of the prisoners announces at the first look the length of their confinement. This remark has likewise been made by Howard and Buxton. At Paris, in the Bicêtre, where the population is not very variable, and where the men are treated as well as in any other

place, the number of prisoners in 1818 was 820. The number of sick was 80, nearly the tenth part. The number of patients with itch was 60, nearly the thirteenth part. But this is the lowest estimate: on some days there were 113 sick and 108 with itch. Hence it follows, under present circumstances, that if we had to build an hospital for a prison of 850 or 900 individuals, it would be necessary to adapt it for 200 patients, nearly one fourth of the whole.

In opposition to the above statement, M. Villermé gives us the results of his visit to the prison of St. Lazarre at Paris, and the "Maison de Détention de Melun." In the latter, which the humanity and genius of the director have rendered a model, there were, out of a population of 561 individuals, only 38 sick and convalescent, and no cutaneous disease.

Exact registers of the diseases of prisons ought to be kept; they would be very interesting under every point of view. Before the discovery of vaccination, the small-pox committed great ravages in prisons. Howard quotes the histories of several epidemics. Every prisoner should therefore be vaccinated on his arrival.

An article in the French criminal code provides that no pregnant woman should be tried for a capital crime. This ought to be extended to all labouring under an acute disease, and they ought to undergo no examination whilst affected with their complaint.

The treatment of diseases in prisons must be modified by circumstances; the physician must endeavour to raise the dejected spirits of their patients, testify an interest in their fate, and speak the language of kindness to them. The medicine of the heart will be more useful than the drugs of the apothecary. The exercise of it is the most difficult, and therefore the most deserving of attention.

The large prisons of France have an infirmary or hospital attached to them, in which are a physician, surgeon, and apothecary. They too often only consist of one or two chambers, furnished with beds, whilst a prison in reality requires a larger hospital in proportion than any other institution.

M. Villermé recommends that each prison should have a sort of lazaretto, where the new comers might be under observation for some time. The infirmary of Sainte Pélagie at Paris is extremely defective; but it is still worse at the Conciergerie, where the infirmary for the men is placed under a vast vault, and is the most damp and dark part of the house. There are great abuses likewise in the preparation of medicines, which are generally entrusted to ignorant boys. It has been proposed, to

obviate this, to appoint students of medicine to this duty. Where there is no infirmary attached to a prison, the sick are only allowed to be conveyed to the hospital, when they are almost in articulo mortis.

The reasons of the difficulties attending their removal to hospitals arise principally from the immense variety of schemes which criminals contrive in order to effect their escape. It is only about fifteen years ago, that a man sentenced to five years of hard labour, was received into the infirmary of the Bicêtre, for a paralysis of the lower extremities. The whole five years he was never once out of his bed, and was only once seen to move his legs, but the very day that the term of his confinement expired, he got out of bed, and walked away. There are other causes which stand in the way of the transference of sick prisoners to hospitals. These, for the most part, cannot spare room to appropriate a sufficient ward to them; and without some provision to prevent escape, it would never do to send them in; or the directors of the hospitals, for the sake of the feelings of the other patients, refuse altogether to admit individuals of such a description. For these evils there are but two remedies, either to have an hospital in each prison, or a prisoner's ward in each hospital.

To illustrate the mortality of prisons, M. Villermé gives the following table:—

Table of the Mortality in the Prisons of the Prefecture of the Police of Paris, for 1815, 1816, 1817, 1818.

Names of the Houses.	Sex.	1815. Population 1st Jan.	1st July	Deaths. 1st half year.	2d half year.	1816. Population 1st Jan.	1st July.	Deaths. 1st half year.	2d half year.	1817. Population 1st Jan.	1st July.	Deaths. 1st half year.	2d half year.	1818. Population 1st Jan.	1st July.	Deaths. 1st half year.	2d half year.	Observations.
Bicêtre.....	Males	704	548	20	19	679	826	12	13	900	930	24	38	928	691	25	14	Condemned to solitary confinement and hard labour. From a fourth to a third of these are detained for debt; a twenty-fifth of the children to the correction paternelle, and others condemned to confinement more or less long.
Saint Pélagie...	Males	430	502	12	7	569	591	17	8	594	531	8	11	493	564	15	9	
Grande Force.	Males	343	247	4	7	385	546	5	5	377	460	1	4	416	386	7	3	Arraigned.
Petite Force.	Females	453	433	16	7	495	324	10	2	390	373	7	7	484	451	10	5	Prostitutes, for not conforming to the Regulations of the Police.
Conciergerie...	Males and Females	76	61	1	1	84	130	—	—	125	126	1	4	88	89	2	3	Persons accused before the Tribunal of Assizes.
Madelonettes.	Females	237	228	2	3	266	331	3	3	355	199	5	2	227	286	2	8	Arraigned Persons—Ditto condemned to Correction—Ditto detained for Debt—and Girls to the Correction Paternelle.
St. Lazare.....	Females	805	663	34	23	685	711	17	15	775	891	19	28	744	665	15	15	Persons sentenced to solitary Confinement, and Girls to the Correction Paternelle.
Maison de Répression, (St. Denis.)	Men, Women, & Children	647	uncertain	109	89	776	689	101	44	668	563	138	120	774	496	118	57	Arrested as Vagabonds & Beggars.
Dépôt de Médicité, (Villers-Coterets.)	Males and Females			47	37	654	729	77	35	713	683	70	58	958	743	87	53	Old and infirm Persons selected out of the Maison de St. Denis.
Deaths Total...				245	193			242	125			273	272			291	167	

Total General for the four Years, 1798.

M. Villermé adds, that in a provincial prison, twenty or thirty deaths, out of an average of from 80 to 100 inmates occur, annually (vide Bérenger, p. 386). "I cannot give," says he, "tables to be depended upon, of the mortality of any prisons, excepting those of the departments of the Seine and the Bagne de Brest, where the mortality is *least*."

M. Villermé gives the number of prisoners in the prisons of France. In July 1818, they amounted to 44,484; of which were

Untried	10,331
Condemned to less than one year's imprisonment	2,264
Condemned to hard labour	1,386
Appellants	502
Condemned to more than one year's imprisonment, but who could not be received into the Maisons de Force for want of room	9,378
	23,861
At the same time, the number of condemned prisoners in the Maisons de Force were	10,700
In the galleys	9,923
	44,484

If the population of France be 29,448,408, this will give a proportion of one prisoner to 662 individuals. This does not include debtors, children imprisoned by their parents, beggars (10,000), nor those arrested temporarily by the police.

But our limits oblige us to bring this article to a conclusion, without noticing our author's interesting chapter on the progression of crimes, his description of the different sorts of prisons established in France, and his account of the galley slaves.

We are well aware how little justice we have done this excellent work, in the extracts we have made from it. We beg leave therefore earnestly to recommend it to our profession, and to the friends of humanity in general. We hail it indeed as the dawn of a brighter day in France, when we see the energies of that wonderful nation turning from war and conquest to the advancement of humanity and peace, and exchanging "the laurels of conquest and the coronals of power for the imperishable wreaths of Faith and Charity." We rejoice to find them following us in the cause of humanity, and we see with no ordinary feelings of pleasure, one of our own profession taking the lead in such a cause. This is as it should be.

An objection has been made by one or two of our readers to the occasional introduction of articles into this Journal, which appear to be more connected with the cause of humanity than

with the practice of medicine and surgery. In reply, we would use the words we formerly employed when speaking of M. Esquirol's pamphlet on mad-houses—"That the cause of humanity is intimately connected with the science which it is the object of our labours to advance. We would further remark, that one reason of the great progress which the cause of humanity has made in these latter times, has been the acknowledgment of the principle, that without 'knowledge to guide and sense to regulate the feelings,' the best intentions will be frustrated. Humanity has in fact began to be studied as a science, and no profession, we believe, has such opportunities of promoting the desirable change, as that to which we have the honour and happiness to belong. None has such opportunities of estimating the heighth, depth, and breadth of human misery; and none, may we not say it, does more to alleviate it. The benevolent may form the most beautiful plan for the alleviation of human pain; the architect may construct the most beautiful edifice for the reception of human misery;—but unless both of them be equally grounded on that practical knowledge of man, which our profession has such opportunities of acquiring, they will be equally futile and useless.

In thus adverting to the deep interest our profession has in the cause of humanity, and its power to promote it, we do not mean to overrate it. We may labour like the architect and sentimental would be philanthropist, and form plans founded on more correct views; but if zeal without knowledge be useless, knowledge without zeal is worse. We shall be only constructing a Promethean scheme, fair and perfect indeed in all its parts, but useless until animated by the fire of benevolence—the fire of Heaven.*

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* Our readers will observe, that in the course of this article we have taken little notice of the labours of our own countrymen in the amelioration of prisons. This has arisen from our anxiety to give a clear, distinct view, of the state of prisons in France, and not from any omission on the part of M. Villermé, who appears to be well acquainted with the labours of Mr. Buxton and Gurney, and the other members of the Society for the Amelioration of Prisons, and he does ample justice to them. To state how highly we appreciate the merits of those associated in this noble cause, would lead us too far. We rejoice to say, that the sentiments of the country in general are becoming every day more in unison with those we have long entertained on this subject.

ART XII. *Sketches of Göttingen.*

(CONCLUDED FROM NO. IV. VOL. I. P. 386.)

LECTURES ON THE PRACTICE OF PHYSIC.

THESE lectures are delivered every morning at ten o'clock, by Professor Himly, in an auditorium connected with his dwelling house, and are generally attended by upwards of one hundred students. Two semestres are occupied by the course, the term of lectures therefore corresponds very nearly with those of Dr. Gregory, of Edinburgh.

Professor Himly has printed his "Lehrbuch der practishen Heilkunde" as a text book. This work is not completed, the first, and only volume published, contains nothing more than the developement of his arrangement, which is founded on Schelling's obscure views of natur-philosophie, which has infected so many of the German school; we shall not therefore attempt to give any detailed account of it to our readers.

The work is divided into two sections; the first contains general nosology, and the second treats of materia medica. The latter section is really excellent, but the first appears, at least to our unphilosophical minds, quite useless. As to the lectures themselves, during the semestre in which we attended them, the professor was occupied with the second part of his course, in which he discussed affections of the stomach and alimentary canal, of the organs of respiration, circulation, generation, and lymphatic system.

If the hearer can separate the practical matter of Himly's lectures from his theoretical views, these lectures may be pronounced very good and useful. He is too much attached to a system, but his lectures contain in general a full account of what is known on the subject, and display great learning and research.

Professor Himly's clinic takes place from eleven to twelve every day. It is connected with a small hospital which is under his direction, founded by some inhabitants of Göttingen, and which derives its support partly from the interest of funds left for its maintenance, and partly from the cloister fund. There are about thirty beds in it. The principal part of the sick at this clinic are out-patients.

When we were at Göttingen Professor Himly also gave a course of medical surgery, from three to four, besides which he reads privatissima, to not more than five pupils, on diseases of the eyes, to which subject he has paid particular attention.

Professor Himly has not of late published any thing but his

"Journal der Ophthalmologie." His text book is not published, being merely given to his students.

LECTURES ON PHYSIOLOGY, COMPARATIVE ANATOMY, AND NATURAL HISTORY.

These lectures are delivered, the physiology at eight o'clock in the morning, comparative anatomy from three to four, and natural history at five in the afternoon, by the celebrated Blumenbach, a name respected and venerated wherever it is known. Blumenbach was born in the year 1752, at Gotha, in Saxony, of parents who were in moderate circumstances. He commenced his studies at Gotha, from whence he went to Jena, where he remained two years and a half, and then came to Göttingen to study, under Haller, Richter, and Röderer. He took his degree as M.D. in 1776, at Göttingen, and then proposed to return to Gotha, with the intention of pursuing his profession; but his Dissertation, "de generis humani varietate," made so great a sensation, from the novelty of the subject, and the excellence of the execution, that on the same day that he received his degree, the University named him extraordinary Professor of Natural History.

Having thus obtained a situation which the natural modesty of his disposition rendered quite unexpected, he assiduously devoted himself to the study of natural history—with what success his numerous works and the splendid benefits he has conferred on science sufficiently testify. It was at this period that he began to form his collection of skulls, of which we shall immediately speak. It will be unnecessary to trace Blumenbach's rise, or to enumerate the various honours conferred on him; they comprise all the distinctions, which the gratitude of science, or the munificence of monarchy can bestow.

His cabinet of natural history is one of the most splendid in the world. It is entirely collected by himself, and forms, perhaps, the best monument of the esteem in which he is held, for he has never purchased a single article in it. It is kept in his dwelling-house, and occupies five rooms. Nothing can be more inappropriate than its situation, or more disorderly than its arrangement. The most valuable preparations are seen out of their cases lying about. There is no systematic arrangement in any part of it; but this is not to be wondered it, if we consider the progressive manner in which this collection has been formed, and the age of its possessor. Many would be happy to arrange it for him, and Dr. Wernekink has done much towards reducing the chaos to order, but Blumenbach does not like any setting to rights in his museum.

The part of his cabinet which attracts principal attention, is his unrivalled collection of human skulls. It has been visited not only by nearly all men of science, but by all the crowned heads of Europe. On this subject Blumenbach says, "If we wish to make great people follow us, and not we them, it is only necessary to make a collection of skulls." This collection is sufficiently known by Blumenbach's work, "Decas craniorum." The most valuable thing in it is a Grecian skull, which is at least 2,000 years old, a present from his pupil the Crown Prince of Bavaria. It is in a perfect state of preservation, and constitutes a most beautiful specimen of the beau ideal of the skull. The next in point of value are the skull of an ancient Roman, and that of a cannibal (Bataku), which he received from the Prince of Neuwied. Nothing can be more interesting than to view these three skulls, placed as they are by one another, and to compare their appearances with the moral differences of character of the nations to which they belong. In an anatomical point of view, the best preserved skull in the collection is that of a negro. On the same shelf stands the beautiful skull of a Georgian female, and some very rare skulls of the inhabitants of Nukahiva, a present of Captain Krusenstern. There is also a remarkable skull of a Cretin, which produces an indescribable feeling of horror, from its close resemblance to that of an ape. We have not room to dwell upon individual parts of this collection; but shall merely remark, that it derives additional value from the care taken to authenticate the accounts given of its contents, and the skulls are preserved in the same state in which they were originally found.

Blumenbach's collection of fossil bones is one of the most beautiful in Europe. Our notice was particularly attracted to the bones of the bear, which bore the same proportion in point of size to the bear of present times, as the calf of one month to the ox of two years. There is also a very fine collection of minerals; and another, no less valuable, of skeletons, in which that of a lioness is very remarkable. The preparations in this cabinet, illustrating the growth of the elephant's teeth, are unique. His wet preparations are invaluable, of which we shall only say, that they are described in his "Abbildungen Natur-Historische-Gegenstände." We may, however, notice as interesting, the fœtus of a porcupine, and a crocodile escaping from the egg. We must not forget to mention his beautiful collection of drawings, descriptive of all nations of the earth; and an invaluable assemblage of curiosities which have no particular relation to science.

The following is a list of his principal works :—

1. Introductio in Historiam Med. Literariam. Göttingen, 1786.
2. Synopsis System. Scriptt. quibus inde ab inaug. Acad. G. Aug. 1737 usque ad 1787, discipl. suam augere stud. Profess. Med. Gott. Göttingen, 1788.
3. Med. Bibliothek. 3 Bde. Göttingen, 1783—95.
4. Institutt. Physiol. Göttingen, 1787.
5. De Vi Vitali Sanguini deneganda. Göttingen, 1788.
6. Geschichte und Beschreibung der Knochen. Götting. 1786.
7. Ign. v. Born—Zwey Abhdll. üb. d. Nutritibus-kraft. Petersburg, 1789.
8. De oculis Leucaethiopum et iridis motu Comment. Göttingen, 1786.
9. De Generis Humani varietate nativa. Göttingen, 1776.
10. Collectio craniorum divers. Gentium. Göttingen, 1790.
11. Ueber d. Bildunstrieb u. d. Zeugungsgeschaft. Gött. 1781.

We dare not trust ourselves even to sketch the character of this wonderful man; for we should be afraid of saying too little, and our readers might think we said too much. There are two points in it, however, which are particularly deserving of attention and imitation. Neither in the whole course of his public lectures, nor in the frequent opportunities we had of conversing with him in private, did we ever hear him speak ill of any man, living or dead; and when, at the conclusion of his lectures on physiology, we remarked that we should not have supposed it possible to get through such a course without an occasional severe remark on those who differed from him, he replied, that he considered science as a vineyard in which we were all fellow-labourers, and that when truth was the fruit to be gathered in it, it was beneath the dignity of a lover of truth to allow the irritation of his temper to interfere with such a noble pursuit. Blumenbach has no enemies, for it is impossible to quarrel with him.

At first view we should be surprised at another point in his character, united as it is with his extremely open and frank disposition. We allude to the philosophical caution which he displays in the adoption of any new theory or opinion. We have already given one specimen of this in the answer he usually made to those who inquired his opinion of Brown's system. Once, and once only, we believe, he was drawn from his habitual caution. Spurzheim was excessively anxious to have Blumenbach's opinion on his cranialogical system, and tried every expedient to elicit it in vain. At length he attacked Blumenbach on his vulnerable side, by bringing a beautiful skull as a present. This was irresistible. The collector struggled between his love of truth and his extreme fear of wounding the

feelings of the craniologist. He looked at the skull, and exclaimed, "My dear Doctor, in your system there is much which is new and much which is true, but the new is not true and the true is not new."

Notwithstanding his incessant labours in his study and his cabinet, his three lectures a day, and the frequent visits he is receiving from strangers, nothing can be more affable or kind than his behaviour to students. He devotes to them the greater part of Sunday, and the evening of nearly every day, from six to nine o'clock, when he receives a certain number at tea. To the English he is particularly attached, having long been on intimate terms with Sir Joseph Banks, and many other distinguished characters. He speaks English perfectly, and possesses all the English works of great merit. He is equally well-informed in the other departments of knowledge; his acquirements seem indeed to be universal. He often realized to our imagination Pliny's beautiful description of Titus Ariosto :—

"How consummate is his knowledge both in the political and civil laws of his country! How thoroughly conversant is he in every branch of history and antiquity! There is no article of science, in short, you would wish to be informed of, in which he is not skilled. As for my own part, whenever I would acquaint myself with any abstruse point of literature, I have recourse to him, as to one who supplies me with its most hidden treasures. What an amiable sincerity, what a noble dignity is there in his conversation! How humble, yet how graceful is his diffidence! Though he conceives at once every point in debate, yet he is as slow to decide as he is quick to apprehend, calmly and deliberately weighing every opposite reason that is offered, and tracing it with a most judicious penetration, from its source through all its remotest consequences."

LECTURES ON MIDWIFERY.

These are delivered by Professor Osiander, and are perhaps among the best we have ever heard. They may be entirely depended on, for they are founded on a long course of accurate observation. His text book is entitled "Osiander's Lehrbuch der Entbindungskunst," which is not yet entirely completed. It promises to be the best work on the subject. Professor Osiander gives two courses in the year, each of which lasts about five months; these are combined with chemical instruction in the hospital.

The Lying-in Hospital is the finest building in Göttingen, and is admirably adapted to the purposes for which it is intended. Besides the accommodation for patients, it contains apartments

for the professor, his beautiful cabinet, and an appropriate lecture room.

Nothing can form a stronger contrast to the chaos of Blumenbach's collection than the exquisite arrangement of Professor Osiander's. It contains a most valuable series of preparations, chiefly illustrative of his particular department. The room in which it is contained is elegantly fitted up, and the preparations, arranged in the most beautiful order, are all ticketed, with a reference to the catalogue. This catalogue consists of seven folio volumes of MS. and to each number is affixed a complete history of the case of the patient from whom the preparation was taken. Professor Osiander owes this beautiful, we had almost said unrivalled, collection to his own industry. He told us that he had often in his younger days gone without his dinner, to purchase the glass and spirit for some new preparation.

We shall not at present enter into a detail of Professor Osiander's opinions or practice, as we propose shortly to review some of his most important works. Although he has educated the greater part of the accoucheurs of Germany, yet this "genus irritabile" are ungrateful enough to make him the constant subject of keen attacks, which he bears with exemplary patience. He is in immense practice, and so great is his fame that he is often sent for to the distance of hundreds of miles for consultations.

The lectures on botany are delivered by Professor H. A. Schrader, from seven to eight in the morning. The botanical garden is one of the most perfect and useful in Europe, the Hanoverian government paying great attention to its maintenance. The lectures on chemistry are delivered by Professor Stromeyer, who, since Klaproth's death, may be considered as the first analytic chemist in Europe. At the latter's death, the Prussian government offered Professor Stromeyer his place at Berlin, but the Hanoverian government making a considerable addition to his salary, he preferred remaining in his present post. He is as good a teacher as chemist, and is peculiarly attentive to his students. Independent of his lectures every day, he exercises the pupils twice a week in experimenting in an excellent laboratory.

We may also here mention Professor Hausmann, whose lectures on mineralogy, and whose collection, are well worthy the attention of the curious.

The lectures on general science and literature are excellent, and every facility is afforded, in this interesting university, of cultivating the higher branches of our science in a manner which is almost unequalled.

ANALECTA.

1. *Case of Bulimia.*

The following notes of a case of this affection were taken at M. Rostan's Clinic:—Anne Denise, aged 36, experienced in her youth misfortunes which influenced much her future health. From her earliest years she had been distinguished for her voracity, exhausting her nurses, and eating more than four children of her age. At the age of six or seven, she ate every day ten or twelve pounds of bread, independent of soup. It was at this period that menstruation first appeared, and puberty was fully declared eight days after the first appearance of the menses. Her father attempted to violate her person; she was attacked by epilepsy in consequence. By the same individual she was exposed in a wood, in order to get rid of her. She now wandered from town to town, living upon fruits, roots, and the little bread given her, but never eating meat or boiled aliments. Journeying without knowing whither she was going, she found herself at Paris, and was taken in the act of devouring, in spite of herself, the bread at a baker's. She fell down accidentally in the street, and received a slight injury on the left nipple. She was taken to the hospital of Saint Louis, where, in spite of medical assistance, a bloody discharge continued from the nipple. Her menstruation went on regularly, and a vomiting of blood, to which she has been subject for some years, continues at certain intervals. Sulphureous baths, sudorifics, bread and milk at discretion, were employed without success. She was then sent to the venereal hospital, on the unfounded suspicion that she was syphilitic, having been often obliged to prostitute her person from irresistible hunger. The mercurial treatment produced no effect. She now attempted to get into service, but was quickly dismissed on account of her voracious appetite. A vinegar merchant kept her some years, and then discharged her on account of her epileptic attacks.

Abandoned to her miserable fate, she devoured the vegetables, which she either bought or found in the streets—the alms she received being but a feeble help to her appetite. At night she slept on the pavement. She at last attracted the notice of a charitable protector, who took her to many physicians. Every thing was tried, but all in vain. Four years passed thus, when she was admitted into the epileptic ward of the Salpétrière. Amidst the means used without success, were bleedings. She left the hospital; her common hunger was satisfied by eight pounds of bread per day; she walked about, worked, and appeared little affected by her fate. The vomiting of blood recurred at intervals, as also what she calls her great hunger; then she devours twenty or twenty-four pounds of bread during the twenty-four hours. At the commencement of the attack, she loses her consciousness, and becomes so furious, if her wants are not satisfied, that she tears her linen, and bites her own flesh. She often came to the clinic. M. Rostan tried ice with some benefit.

Her actual state (17th January, 1820). Finding herself unwell, she tried to prepare some soup. While the fire was burning, she was suddenly seized with her great hunger, she left the fire without thinking, and was reproved, or rather feared to be reproved, for so doing. She was immediately affected with paleness, loss of consciousness for some minutes, cold sweats, suppressed menstruation, and towards evening five very copious vomitings of blood. The next day she was bled; the

vomitings ceased. Two days after, her great hunger returned. Being still unwell, she came into the hospital. On the 30th, at the morning visit, her face was pale, her eyes humid, her look timid. The general en bon-point seems to be that of health; her limbs are all well rounded, and of a softness which indicates the excess of cellular texture to muscular force; her external conformation is perfectly regular. The nervous sensibility is so easily excited, that the least moral impressions brings on convulsions, momentarily suspend reason, cause syncope, and induce the symptoms of a slight attack of epilepsy. There is no external peculiarity of the epigastrium, but it is the seat of a pain which is increased by pressure, and which is felt under the summit of the xyphoid appendix; occasionally, however, it is experienced entirely on the right side. This pain commenced with the use of dressed food, of which she now uses very little. At intervals it is worse; and it is at this period that her great hunger and the vomiting appear. The patient describes the pain as resembling the efforts made to break a piece of wood. While this lasts, she experiences a sensation she cannot describe, which leads her to eat, till a feeling of satiety and fatigue are manifested. At this period, she takes in succession five, six, or fifteen pounds of food. The consequences are no less distressing. She generally feels a body in the œsophagus, which she compares to a large loaf; her respiration becomes very painful; she remains motionless—changes colour, feels contraction at the mammæ—cold sweat covers her—she makes efforts to eject the body, which appears to be in her throat, and which, finally, seems to her to descend into the stomach. She is, at length, released by vomiting black blood in clots, floating in a clearer blood, without any alimentary matter. The appetite now returns to its ordinary standard. The stools are less frequent than in healthy individuals, and occasionally mixed with blood. Digestion is rapid, but irregular. Her food is taken as her hunger dictates. Her food consists almost entirely of bread (eight or nine pounds day and night). She seldom drinks except in her epileptic attacks. The tongue is natural. The pulse is not full, respiration becomes painful by the least exercise, and impossible, if she carry in her hand a heavy burthen. The urine is not copious, and is occasionally bloody. During the syncope, transpiration is increased; the menses, which generally appear three times a month, are suppressed, and there is a feeling of heat at the uterus. She sleeps little, and passes part of the night in eating. Her mind is sound except during the hunger.

On the 9th of February, being at Paris, at her protectresses, she was seized with hunger. They gave her the soup which had been prepared for twenty-four guests. She eat it in a moment, and devoured besides twelve pounds of bread. (*From the Nouveau Journal de Medecine*).

2. *Spontaneous Perforation of the Stomach.*

The following particulars of a case of this nature are given in the Nouveau Journal de Médecine, for January 1820. They accompanied a preparation of the stomach, presented by M. Ségalas. An infant, sickly at birth, was entrusted to the care of an improper nurse, and when, on discovering this fact, it was brought home, the mother could only afford it the remains of her milk, which at first had been very abundant. The child, however, grew pretty well, and cut two incisor teeth. When six months and a half old, she was seized with a looseness. By the aid of medecine, this disappeared towards the end of the seventh month, after having produced great emaciation, but it came on again a week after, and resisted all the usual means. The diarrhœa was accompanied with vomiting of the lightest alimentary substances. At first these were only rejected in part, or two or three hours after ingestion, but on the 20th day of the relapse they were vomited as soon as taken; this continued for four days, at the end of which period the child expired. She was eight months old; the diarrhœa had lasted forty-five days, and the vomiting twenty. The relapse of the diarrhœa was accompanied with a

disposition to sleep, which increased to such a point that it was only the efforts of the nurse which could rouse her.

On dissection the stomach was found empty, occupying its usual position, and preserving its natural relations, but reduced partly to a greyish soft pulp, which escaped as soon as the viscus was raised. The stomach had lost its great cul-de-sac, about a third of its posterior, and rather less of its anterior surface, thus presenting an opening, irregularly rounded, with fringed borders, without any trace of inflammation, exteriorly or internally; the mucous membrane was destroyed to a greater extent than the muscular coat, and the latter than the serous. The whole of the internal muscular membrane presented, at different parts, rounded spots, varying from three to eighteen lines, but without manifest ulceration; the colour of some of these was greenish, of others yellow, and of some red. The liver was discoloured; the peritoneum, even the part corresponding to the stomach, was perfectly healthy. In the head the arachnoid coat was strongly injected, the cerebral mass was extremely soft, and the pia mater contained nearly two ounces of limpid serosity, as well in the ventricles as on the surface of the brain and the spinal marrow.

This case is important from its connection with medical jurisprudence. Cases of spontaneous perforations of the stomach are by no means rare, and besides those to be met with in authors, several have been published in the medical journals. M. Chaussier has seen several, particularly in parturient women, but M. Ségelas is not aware that any such case is on record in so young an infant.

3. *Case of Extensive Inflammation.*

In the Journal Général de Médecine Française et Etrangère, for January last, will be found a very interesting case of inflammatory disease, which affected successively the whole length of the alimentary canal. It is given by M. Bourgeois, a resident member. To this patient M. B. was called some time in February 1819. He is stated to have been then about twenty-seven years of age, and to have been of a scorbutic diathesis, which shewed itself during his youth in different forms of cutaneous disease, and subsequently in frequent discharges of blood from the bladder, without pain or other inconvenience. In other respects he was in good health, until, having got his clothes wet in a shower of rain, he was seized with a violent pain in his throat, which, in spite of the curative means employed, viz. leeches, gargles, poultices, &c. increased very rapidly, without any fever, but attended with great oppression and frequent syncope. The appearances of the throat and the different symptoms are described with great minuteness *. It was not till the sixth day that they shewed any tendency towards a remission. On the seventh day the patient believed that the disease had come to a termination; but by and bye he began to experience a new pain, the course of which he described by passing his hand along the length of the sternum. On the 14th day, symptoms of the inflammation having extended into the stomach appeared. From this he was in great agony until the 17th day, when an abatement of his sufferings took place, which lasted until the twenty-first day. During the night of the 22d he was suddenly awaked by a severe pain in his bowels, with urgent desire to go to stool, the discharge by which was of the colour and consistence of blood, and almost incessant. Early on the 23d, M. Bourgeois found him pale, and with every symptom of exhaustion. On the 27th he thought him out of danger, although he

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* By the third day the back part of the mouth, the tonsils, and the pharynx, were in a state of violent inflammation, of a bright red, interspersed with white spots; the swelling internally was great, preventing deglutition, and extended to the parotid and submaxillary glands: in a word, the symptoms were those of angina pharyngo-tonsillaris.

was still troubled with flying pains in the abdomen, and in particular about the stomach. The cicatrices which had formed about the fauces began to come away in large pieces, and on the 31st day some clots of blood were visible in his saliva; this increased greatly towards midnight, and the hemorrhage had so affected the system that the pulse had become almost imperceptible, and the patient lay in a state of complete syncope. M. Bourgeois having succeeded in checking the hemorrhage, the pulse began to return, the other symptoms gradually wore off, and by the fortieth day a complete recovery was established. The affection of the stomach is stated to have been very severe, denoted by anxiety, cramps, retchings, burning heat in the epigastrium, which was painful to the touch; thirst, and immediate rejection of every thing taken to quench it, along with the tongue being thickly coated with a yellow mucus. In these circumstances M. Bourgeois had recourse to leeches, emollient emulsions, and diluents. On the evening of the 31st he made use of ether, vinegar, astringents, &c. in different forms.

4. *Case of Periodical Cough transformed, by the use of Belladonna, into Hysterical Attacks. By M. Chomel.*

A YOUNG lady, aged twenty-one, of a delicate constitution, and who had been subject in her youth to attacks of hysteria, came to Paris to consult M. Chomel, for a periodical cough, which began every day towards two o'clock, p. m. and lasted until seven or eight, with extraordinary violence, affecting the parietes of the chest and abdomen, and causing great pain in the head, by the efforts it occasioned; the sound of the cough was so shrill that it was heard in the street. The paroxysm terminated generally by sweating. The patient could not point out any particular part of the trachea where there appeared to be irritation, nor could she explain what induced her to cough thus. She became very thin, lost her appetite, and was capricious in the exercise of it, choosing the most indigestible articles; she was melancholy, did not sleep, and menstruated with pain and difficulty. M. Chomel found on inquiry that the cough had lasted a year, but that the paroxysms at the commencement had only continued an hour or two, but had progressively increased. The patient had been, during the period above mentioned, attacked with intermitting fever, the fits of which occurred at different intervals from the cough. The fever was cured by bark, which, however, produced no effect on the cough. The usual cough medicines having been used in vain, M. Chomel had recourse to narcotics, and chose from them belladonna, from its known good effects in hooping cough and nervous cough. An emetic being previously given, three pills, containing a quarter of a grain of the extract, were administered, at the interval of half an hour between each, on the 14th of August. At the period when the cough usually appeared, the patient was seized with a violent fit of hysteria. M. Chomel viewed this as favourable; he did not regard the convulsions as the immediate effect of the remedy; they were rather, he thought, to be viewed as the remote cause; it seemed as if, by one of those metamorphoses so common in nervous disorders, the disease, chained down in its present form, had re-appeared in a new one. M. Chomel was therefore induced to persevere in the employment of the belladonna, hoping that if he could prevent the fit of coughing for eight or ten days, it would not be difficult to combat a slight hysterical affection. The following day the patient was with difficulty persuaded to take two of her pills, an hour before the attack; the cough re-appeared, but it only lasted fifty minutes, when it was succeeded by the hysterical affection. The 16th, the patient refused to take the belladonna; the cough came on as usual, and there was no hysterical paroxysm. The 17th, having taken the belladonna, there was no cough, the hysterical attack taking its place. Notwithstanding the obstinacy of the patient in refusing to take the medicine regularly, the cough was got rid of, and the hysterical symptoms were subdued by bark: she recovered perfectly.

In the report made on this case by MM. Portal and Duméril, it is observed that

Sydenham mentions some similar cases, in speaking of hysterical affections. The disease sometimes fixes itself upon the lungs, where it produces constant and violent cough, but without expectoration; and although this hysterical cough is neither so violent nor painful as that named convulsive, it is more continual. It is however very rare, and Bacher cites the case of a lady affected with hysterical attacks, which were succeeded by a very violent convulsive asthma. M. Alibert * mentions the case of a woman who alternately laboured under catarrhal fever and hysteria. Many analogous facts prove that hysteria may alternate with nervous cough. M. Chomel's case may be therefore referred to the name of tussis hysterica of Sauvages.—*Nouveau Journal de Medecine.*

5. *History of a Case full of Needles introduced into the Bladder of a Young Woman, aged twenty-eight, and extracted eight days afterwards, by M. Silvy.*

The instrument had passed into the bladder four days before M. Silvy saw her, and was in length and thickness about the size of a man's middle finger. She complained of severe lacerating pain in the hypogastric region, but M. Silvy, after having introduced his finger into the vagina, ascribed her painful sensations to the irritation which the parts had undergone from the previous friction and titillation, and contented himself with prescribing an emollient injection, an emulsion with nitre, and repose. In four days he was again called to her, when she assured him that she had herself felt the foreign body with her finger, and that since his former visit her urine had come away only in drops and with very great uneasiness. The hypogastrium was painful to the touch, and slightly tumid. Having at length introduced a catheter, he also distinctly felt the needle case. Instead of having recourse to the usual means of dilating the urethra, he introduced his finger, to which, he says, the parts offered but a feeble resistance; he found the instrument situated transversely in the fundus of the bladder, and having with difficulty turned it, and directed one of its extremities to the opening of the urethra, he withdrew his finger, and desired the girl to make a strong effort, which she did, and the case was immediately *darted to the distance of three feet.* On examination he found that the case had already become partially incrusted; the girl rapidly recovered. He mentions a case by M. Rétif, where the needle-case had been upwards of three months in the bladder, without any other consequence than stranguary. M. Rétif passed his finger into the bladder, but he found the instrument so thickly coated with calcareous matter, that he was obliged to have recourse to the high operation of hethotomy for its extraction; the patient died. MM. Cartier Régal and Faure were more successful in making their incisions through the vagina.

No. 6.

The Society of Medicine of Paris offers a prize of three hundred francs for the best Essay on the following question:—"Déterminer la nature, les causes, et le traitement des convulsions qui surviennent pendant la grossesse, dans le cours du travail de l'enfantement et après la délivrance." The papers written in Latin or French, and bearing a motto, also marked on a sealed letter containing the name, quality and address of the author, must be delivered, post paid, to the Secretary-General before the 31st October, 1820.

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* Elémens de Thérapeutique, tome ii. p. 28.

7. *Remarks on the Medical Topography of the Hospital of the Convent of St. Bernard.*

(Drawn up by M. Hipp. Cloquet, from notes communicated by the Reverend P. Bisela, Prior of that Hospital).

In geography, the term climate is applied to a space of the globe comprized between two parallel circles of the equator, and which is measured in an arbitrary manner, according to the length of day. In medicine, with Hippocrates and Cabanis, we understand by climate the differences of one country from another, in regard to seasons, soil, and temperature. In this point of view the Rev. Prior has given an interesting account of the climate of the mountain which he inhabits.

The point, at the summit of which is seen the hospitable convent of Mount St. Bernard, is bounded on the south by the Mont-Mort, and on the north, by Mount-Chenalettaz. At a more distant point, its horizon is terminated by Mont Vélan; and a naked rock called the sugar loaf for its shape, with the Mont de Bossaz, are its boundaries on the west. On the last mentioned side, close by the hospital, is a lake, agreeable in appearance, but too small to be compared with the Swiss lakes. No fish are found in its waters, probably from its great cold. During eight or nine months successively, it is covered with ice from twelve to thirty inches thick. The slope of the Chenalettaz is covered with a little turf, and forms the only agreeable prospect from the convent. The name of Mont-Mort corresponds to the absence of all vegetation which characterizes it It is along the side of this mountain that those dreadful avalanches are precipitated, which keep up perpetual snow in the vallies to the east of the convent, and too often prove fatal to the unfortunate traveller.

The humane purposes of this institution are well known. It is no less interesting to the naturalist than the philanthropist; and the physician uniting these two characters, will find irresistible attractions in this dreary spot.

There is nothing particular in the air when chemically examined. It does not apparently differ from that of the Swiss mountains in general. This cold air, alternately dry or humid, rather acts upon the human body by its qualities than by its proportions of oxygen and azote, which are always the same. Water boils at 74 deg. 6-10ths, in the medium height of the barometer, which is about 20 inches, 11 lines. This phenomenon gives rise to a peculiarity; that is, that it is more difficult to dress food in these elevated regions than in the country below cæteris paribus, which is very inconvenient on account of the difficulty of procuring wood. Referring to the hygrometer, it is found that the dryness is greater on Mount St. Bernard, the eternal abode of fogs and snows, than in more favoured countries. This depends, probably, on the rarefaction of the air at such a height. Under a given volume of air, the pressure from above being less, there are here fewer aerial and aqueous particles in contact with the hygrometric hair than in other places. It is, nevertheless, worthy of remark, that in the interior of the convent, although the building is situated on the most exposed point of the rock, and constantly beat upon by the most violent winds, the humidity is greater than the instrument would lead us to suppose.

During eight months, the convent is, as it were, buried in snow, and during the cold season the interior walls are covered with a hoar frost, four or five lines thick. The rarefaction of the air not only influences the degree of heat, the boiling point, and the hygrometer, but it has an effect on the respiration worth noticing. Individuals of a good constitution, and with sound lungs, experience a peculiarly pleasurable sensation, while the unhealthy, and particularly the asthmatic, experience much pain and difficulty in respiration. Such travellers have even been seen to become asphyxiated, without any other apparent cause than that we have just mentioned.

It is also to the rarefaction of the atmosphere, that a particular phenomenon,

which takes place here in regard to wounds, is to be attributed. Cicatrization, cæteris paribus, requires double and triple the time it does in the plains. This is strikingly illustrated in the tediousness and difficulty with which stumps heal on the mountain, which almost immediately after the patients descend into a more temperate climate, heal with astonishing rapidity. To the same cause is ascribed, the large doses of medicine which require to be given in St. Bernard; for instance, six and eight grains of tartar emetic must be given to produce the same effects three administered elsewhere. The pure fresh air of St. Bernard, producing a vigorous appetite, might lead one to suppose that it was a healthy residence; but experience proves the contrary: and while the traveller would expect to meet reverend fathers, with locks as white as the snow among which they live, he finds to his surprise, very few who have passed their thirtieth year. This is in direct opposition to Lord Bacon, who has advised men to live in the upper regions of the atmosphere as more salubrious, because, he observes, the birds who live long, owe it to the purity of the air they breathe. Those who are much on mountains know that the appetite is intensely keen, and digestion very rapid. More nourishment is therefore necessarily taken, the digestive organs are soon debilitated, and this is succeeded by a train of bilious diseases, inflammatory complaints, apoplexy, &c. The contact of so cold an air as that of Mount Saint Bernard, exercises upon the living fibres an injurious impression, and makes a sort of contraction, which renders them stronger in appearance, but which pushed to excess is very injurious; besides, the pressure of the air which constantly envelopes us and our senses, as the water surrounds fish, is necessary to preserve the equilibrium between the living solids and the humours floating in them, it counterbalances the elastic force of the fluids of our body; consequently, as this purpose is here considerably diminished, it is not extraordinary that the equilibrium should be proportionably destroyed. The most common pathological affection here is rheumatism, and which arises from the various causes already alluded to. The only remedy which has yet succeeded in similar instances, has been to abandon the high regions, and take shelter in some distant and more temperate valley.

The only months in which a residence at St. Bernard is wholesome or agreeable, are July, August, and September. March, April and May are the most unhealthy months. Besson, Laborde, Ebel and other travellers, have declared that the sky was never clear for one day together, oftener than ten or twelve times during the year. Since 1817, Observations made with great care, shew that such weather is less rare than they affirm. In the summer of 1816, every week there was a fall of snow. From July, 1818, to August, 1819, more than sixty-five fine days were counted. As to the cold, the thermometer does not appear to have been lower than 27°. R. but it never rises above 17° × 0, and when so, not for above a moment at a time.

8. *Operation of Laryngo-Tracheotomy.*

(From the Nouveau Journal de Médecine, Feb. 1820.)

A BOY, aged nine years and a half, swallowed a white kidney bean, about eleven o'clock, a. m. on the 23d January, 1820. Immediately his face became red, he coughed violently, and appeared in a state of extreme agitation. His mother introduced deep in the fauces a leek; then she made him swallow a crust of bread and thick soup: the symptoms became milder; the child said he felt nothing, then in a moment that he still felt something, pointing at the same time to his throat. At half-past five in the afternoon, Dr. Jadelot gave him an emetic of tart. antim. but without any result; he also recommended that they should endeavour to make him sneeze. At seven o'clock there was a sort of rattling in the throat, with a cough very like that which takes place in croup. The boy, when asked where he felt uneasiness, pointed sometimes to the top of the sternum, on the right side,

sometimes to the left side of it, and sometimes to the middle of the neck. Ipecacuanha was given, and induced severe vomiting. From nine to eleven, p. m. he slept quietly. Another physician being called, intermitted the emetics, prescribed a quieting drink, and recommended a consultation. The night was passed in tranquillity until about four in the morning, when the cough returned with the same sort of sound, difficult breathing, and sudden flushings of the countenance. The next report is as follows:—24th, eight a. m. respiration more difficult, deep, with a low rattling noise; the voice remaining as in health. The patient said he did not experience pain but while coughing, and then always at the top of the chest. During the day there was a manifest alleviation of the symptoms; he slept quietly—was cheerful—the cough returning from time to time. As he said he felt hungry, he was allowed some vermicelli. At half past four, the cough became more frequent, the breathing, at intervals, deep, unequal and noisy, with agitation and a degree of fever. At five, MM. Boyer, Jadelot, Vareliand, Troussel, and Delvincourt met in consultation. M. Boyer proposed tracheotomy, which, owing to the reluctance of the parent was not performed until next day at half past ten. In the mean time he passed a very bad night. The cough was more frequent, and almost always croupy.

The patient being placed in a proper situation, M. Boyer, on the patient's right side, made with a curved bistoury, in the median line, midway betwixt the chin and sternum, an incision about an inch and half long; the blood flowed profusely, from a vein which was tied; at the second incision another vein was cut, which also required a ligature; then a third and a fourth. With a straight bistoury he then made a small incision into the trachea. The air rushed out with considerable noise, and forcing before it a quantity of blood. The voice continued. The opening of the wind pipe was then enlarged towards the larynx, upon a grooved director. The voice immediately ceased, the air passed out and in through the wound, but there was no appearance of the bean, and no attempt was made towards finding it. The wound was dressed slightly, the patient was put to bed; and it was resolved, that the best thing that could be done, would be by and bye to excite cough and sneezing. During the operation, he had become very pale and fainted, which, however, gradually went off. About one o'clock, he complained that he could not sleep, and now and then could be distinctly heard a noise, as if something were rising and falling again in the trachea. About two o'clock, he fell asleep, and advantage was taken of this opportunity to put a little snuff into his nose. Immediately, he awoke in a start, crying and in great agitation, with convulsive cough and flushing of the face; all which lasted but an instant, when the cause of all the symptoms was found lying on the bed. It appeared as if it had been partly boiled, and was slightly fœtid; it had been about nine lines long, five broad, and four thick, and about two-thirds larger than its original size. The wound was dressed with compress and bandage, and was entirely closed by the 12th of February, the voice remaining perfect. By the operation, three or four of the rings of the trachea, and the whole of the cricoid cartilage, were divided. M. Boyer has frequently said in his lectures, that this operation of laryngo-tracheotomy may be in different circumstances very advantageous, but until this case occurred he never had an opportunity of performsng it.

9. *Case of Hydropericarditis Acuta, successfully treated. By Dr. C. F. Heusinger.*

It is generally thought that diseases of the heart have greatly increased of late years. This has been attributed by the French to the terrors of the Revolution, and by the Germans to the wars and calamities in which they have been involved. It may perhaps be accounted for by the greater degree of attention which medical men have paid to the subject.

Dropsy of the pericardium is generally the result of chronic, seldom of acute in-

flammation of the heart and pericardium; it is generally complicated with other organic diseases of the body, and is commonly the last effect of organic disease of the heart itself. There are very few cases on record of real idiopathic dropsy of the pericardium, and still fewer of cures effected. Cases of acute inflammation of the pericardium are also very rare, although their existence may be inferred, a priori, from the analogy of other serous membranes to that of the heart. This is Kreysig's view. Testa has given some cases of idiopathic dropsy of the pericardium, which were long in running their course. Sidren has also published a similar case, which terminated fatally, but it is very imperfect. Kerksig relates a case of recovery, but it was not very acute. The following case, by Dr. Heusinger, will, it is presumed, derive additional interest from its rarity.

G. Neumann, a large, strong, well-made man, who had served several years as a cannoneer, was admitted into the hospital for a chancre. Calomel was administered, and he took to the amount of 40 or 50 grains, from the 29th March to the end of April Salivation came on, but gradually subsided, and the patient was about to leave the hospital, when, on the 7th of May, he began to complain of shivering, flying heats, and pain in the limbs. On the 8th he was covered with an eruption like urticaria, which, by warm diluents, disappeared on the following day; but on the 12th he was attacked by rigors, followed by burning heat and great piercing pain in the vicinity of the manubrium sterni, with a feeling of contraction in the neck, dry cough, anxious breathing, burning skin, and puffed face. He was largely bled, and purged by a glyster. The patient passed a restless night, the inflammatory symptoms were little abated, the face had a bluish tint, swelled and puffed up. The mistura nitrosa and a glyster were prescribed.

On the 14th, Dr. Heusinger saw him for the first time; he found him laying on his back with the breast much raised. The face had a blueish marble tinge, the lips and eyes œdematous, the look extremely anxious, the features disturbed; on the breast and arms here and there blueish red circles were apparent. The whole body appeared somewhat swelled, but not œdematous, the skin dry, the temperature heightened, respiration short and very anxious (performed by the abdominal muscles), and violent cough without expectoration. The patient could fill the lungs with air, but this act was followed by a restlessness, symptoms of suffocation, puffing of the face, and various spasmodic affections which rendered a repetition of this act impossible. The tongue was white, thirst unquenchable, the urine scanty with a red thick sediment. The bowels confined, though a small motion had been procured by an injection. There was great pain and tenderness on pressure, at the pit of the stomach, drawing pain in the shoulders, particularly the left, and a numbness of the left arm. The beating of the heart was very indistinct, much extended, and most distinct at the lower end of the breast bone. The pulse in the beginning was regular, hard and small, but subsequently, on the slightest motion, became unequal. He was largely bled, and two grains of calomel with one of digitalis were given every two hours. The symptoms were a little alleviated by the bleeding. On the 15th, there was a little alteration, leeches were applied to the left side. On the 16th, all was much the same; he was bled again, and one grain of camphor added to the powder. On the 17th, all the symptoms increased, the whole face was œdematous, and the spots formerly alluded to, were in great numbers. He was bled again largely, and on the evening was rather better. On the 18th, though he had passed a restless night, there was considerable abatement in the symptoms; the pulse became regular and equal, the pain in the pit of the stomach, however, still continued. A blister was applied to the breast. In the evening, perspiration appeared, and the pulse was calm. On the 19th, there was a slight exacerbation, which was removed by bleeding. After this the symptoms all gradually disappeared.

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The Title and Index to the Second Volume will be given with our next Number. *Subscribers* are requested to send in their Names to the Publishers, before the 20th of December next, as it is proposed to give a complete List with the commencement of our Third Volume.

THE

QUARTERLY JOURNAL

OF

FOREIGN MEDICINE AND SURGERY.

OCTOBER, 1820.

ART. I. *Recherches sur la Situation de l'Orifice interne de la Fistula a l'Anus, et sur les parties dans l'epaisseur desquelles ces Ulcerés ont leur siege. Par le Docteur F. Ribes.*

(Communicated by the Author.)

IT is now twenty years since I first announced in my Lectures on Surgery, that I was engaged in making a series of researches, for the purpose of rendering myself certain, as to the precise situation of the internal orifice of the Fistula in Ano. What I then said respecting the situation of these openings, and on the course pursued by the fistula, has been so imperfectly repeated in some theses, and so much abridged in others, as to preclude the possibility of forming any fixed opinion on these points; and has induced me now to publish the result of my researches on the subject. The following are the reasons which led me to bestow my labour on the points in question:—

At the period when Desault inspired his numerous auditors with his own enthusiastic love of surgery, he also strove to introduce changes into many surgical operations, by means of which he proposed to carry them to the highest degree of perfection; yet he did not induce M. Sabatier, a more learned and discerning man, and whose mind was calmer, and of a far less ardent cast than that of Desault, to adopt all the changes he proposed. Sabatier still continued, and always with success, to treat fractures of the neck of the femur, the clavicle and the knee-pan, by posture and bandages of the simplest cast; and he likewise continued to make use only of a canulated director and a bistoury in his operations for the fistula in ano. Of the

success of his practice in the treatment of fractures, I had had abundant experience; but not being equally convinced of the advantages of his method of operating on fistula in ano, I took an opportunity, when talking with him on the subject, to remark, that it was true, that as often as he found the internal orifice of the fistula near the margin of the anus, his operation never failed of success; but I could not see how he could operate precisely with these two instruments only, on any fistula where he could not find its internal orifice, when that orifice was beyond the length of the finger, or when the intestine was denuded very high up, or when the fistula was of great extent.

In answer, he told me that, during forty years which he had dedicated to practical surgery, he had operated on a large number of fistulæ in ano, both in the Hospital of Invalids, and in Paris; that he had never found any difficulty in the operation; that he had always found the internal orifice to lie near the margin of the anus; that the canulated director had constantly answered his purpose; and that, finally, this operation appeared to him to be so excellent and simple, that it would be difficult to invent a better.

"If," added he, "the internal orifice of the fistula were placed beyond the reach of the finger, a circumstance undoubtedly of extremely rare occurrence, for I have never yet met with one at this distance, it would be necessary to treat it with deference, and only employ gentle means, because we could not in such case perform an operation, but at the risk of subjecting the patient to deadly hæmorrhages.

"Sometimes, it is true," continued he, "that we cannot find the internal orifice of the fistula, nor can we get the director into the rectum by this opening, and it has been advised in this case, especially if the intestines be denuded, to pierce it at the highest possible distance, and to make an incision the whole length of the denudation; and also, that though the sinus remains on one of the sides of the incision, yet it is pretended that a cure will nevertheless take place.

"I am of opinion," said he, "that any person acting thus cannot obtain the desired success; because the disease must necessarily be subject to a relapse, seeing that the source of the moisture proceeding from the excrement, and gradually draining itself into the cells of the cellular membrane, is not obliterated. In such case, when the canula will not pass into the rectum by the internal orifice of the fistula, my advice is, that the operation be delayed awhile. It will probably not be long before we arrive directly into the intestine, and then perform our operation with certainty of success.

"If the rectum be found denuded to a great extent, by the dissolution of the cellular membrane, in case the fistula terminates externally, we judge that union of the sides or bounds of the disordered part cannot take place, because every surrounding circumstance seems to oppose the approach of the parts. It has been thought that, in order to put an end to the disease in such case, it would be best to divide the intestine longitudinally, from the extreme upper to the lower part of the denudation, in order to render the fistulous opening continuous with the margin of the anus, and thus to add the whole depth of the sinus to the natural size of the anus itself. By this means, the whole of the new wound, and the fistulous sinus ought to become firm, to offer a surface, to a certain extent analogous, to that of the bowel itself, and by and bye able to endure the passage of the excrement without inconvenience—or, in other words it ought to cicatrize.

"I am of opinion, that this procedure cannot be void of danger; because, in dividing the intestine to a certain height, we expose ourselves to the chance of dividing the large arteries, and thus we may give origin to distressing hæmorrhages, not only difficult, but impossible to be cured. As for myself, I even should not operate at all, merely contenting myself with proper applications, and leave the disease to nature, relying on the possibility that the parts may unite. In effect, the rectum always distended in a greater or less degree by the accumulated excrement, fills a large portion of the cavity of the pelvis. The urine also, by its accumulation, distends the bladder, and brings it near the boundary of the lower pelvis. The lower portion of the peritonæum is pushed downwards by the viscera of the abdomen, and tends to fill up the void formed by the sinus. The external sphincter, the ischio-coccygian muscle, and especially the elevator of the anus, still farther fill up the void alluded to; and besides, it is impossible that the whole of the cellular structure of this region should be so destroyed, but that a greater or less quantity must remain, and sufficient, by the subsequent growth of granulations, to unite and bind all parts together. Hence, under all these circumstances, the fistulous opening ought to cure itself without any operation, unless some local or constitutional disorder stand in the way.* If the

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* The young practitioner may be liable to be seduced into a deceptive confidence by this detail of the modes by which a natural cure is to be begun and completed, in such a disease as fistula in ano. M. Sabatier's healing agents have been ingeniously called up, but this appearance of the whole, except the last, will avail

patient be affected with any wasting disease, and such as naturally tends to produce death, of course any operation would be perfectly useless."

"After what I have stated," said he, on closing his remarks, "and from what you have seen of my practice since you have been near me, and also from what you are well acquainted with from your own experience, you will be convinced that the operation for the fistula in ano is one of the simplest of any in surgery. Yet it is astonishing how a thing so simple in itself, could have been rendered so highly complicated, the whole has been carried to such a degree, that it would almost seem as if difficulties have been created, for no other purpose than that of finding out means of overcoming them."

I attached too great importance to these remarks of my illustrious master, not to form the resolution of examining diligently every dead body that came under my hands, affected with fistula in ano; and the following pages detail the result of my researches. Before, however, I proceed to state what little I have to add to that which is already known respecting the disease, it will be necessary to take a rapid view of the disposition of the anus, and of the parts which enter into its construction.

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him nothing. If any spontaneous cure is to be expected, it certainly must be owing to the granulations of the disordered surfaces gradually approaching and interjoining one with another. Pressure may do something in bringing the diseased surfaces nearer, and thus shortening the distances to be closed by the new granulations, but nothing more; and besides, could it be of any great avail, the uncertainty of the bearings of any given pressure from agents constructed as are the bladder and the rectum,&c. which must be constantly changing in size and distribution, would prevent the possibility of its doing much good even under the most favourable circumstances. Could we establish a pressure as constant and as efficacious as that of a suture, we might in the early stages of the disease generally expect a cure by the means of our art: such pressure, we need not repeat, it is impossible to procure, and still more so when it is to be accomplished by viscera, hardly bearing on the diseased part, and ever varying in size, as they fill or are emptied. As healing by the first intention is not to be looked for in ulcerations of this kind, it is on the granulations alone that we must rest for the spontaneous and general adhesion and obliteration of the cavity, if any such can be effected; but herein many difficulties stand in the way of cure, and the chief one is the tardiness with which sinuous ulcers in parts possessing so little of the principles of life, as the cellular membrane surrounding the upper portion of the rectum; and in reality, granulations do shoot with such difficulty as to render a spontaneous cure in any deep fistula rather to be desired than to be expected.—T.

Of the Anus. — This opening is more or less sunk, or formed into a cavity, according to the nature of the sexes. In the female the hollow is very little, so much so, that it appears almost on a level with the tuberosities of the ischium, which themselves are naturally flattish and little projecting; whereas, in the male, the orifice of the rectum is much more depressed, a disposition undoubtedly arising from the greater projection of the tuberosities, and from their being much less distant from each other, the necessary consequence of the smaller capacity of the bones of the pelvis. In the female we readily discover the union of the skin of the perinæum with that of the internal membrane of the rectum, and this union is almost on a level with the perinæum; but in the male, it necessarily happens, that it must proceed much deeper, in order to effect its union with the internal membrane; and by consequence, the operation for fistula is much more easily performed in the female than in the male. The internal coat of the rectum is much more extensive than the muscular one; and their union is effected by an extremely lax cellular structure: hence, when the muscular coat contracts, the internal one is folded on itself, and thus gives the internal surface of the rectum a wrinkled aspect. These wrinkles, which disappear when the rectum is dilated, but which nevertheless are apparent when it is only a little contracted, are all directed transversely, and occupy the three upper parts of the intestine, whereas we rarely find them on its fourth and lower part: we must bear in mind, however, that wrinkles are constantly found here, but that they are always disposed longitudinally.

I have diligently sought, but in vain, for certain semilunar folds which have been stated to have existence here, and more or less in number, their floating edge directed upwards, on the sides of the cavity of the intestine: Morgagni, however, found real valves, instead of these folds, in two subjects. In one of them they had a circular form, but in the other they bore a kind of crossing in their structure. They were situated about the length of the finger above the anus.

We easily see the openings of the mucous ducts along the extent of the internal face of the intestine; but it would be difficult to say whether they are directed in their course from above downwards, or from below upwards; and it is equally difficult to determine that they are simply directed along the longitudinal axis of the intestine.

Mention has also been made of a species of lacunæ, the openings of which are directed upwards, and their bottoms downwards; but I have never been able to discover them. I have, however, always found, at about four or five lines above

the margin of the anus, three or four depressions, which bear some resemblance to those which are found at the origin of the aorta and the pulmonary artery, when the sigmoid valves are taken away from them; but those in the rectum are of much greater magnitude: and I have little doubt, but these are what have been mistaken for lacunæ. I have often examined them very attentively, but I never could discover that they presented any opening—I have constantly found them smooth; and can only say that these depressions are generally directed a little upward.

The internal sphincter muscle and the hæmorrhoïdal plexus are found at the lower part of the rectum, between the mucous coat and the fleshy longitudinal fibres. In reality, when the internal coat of the rectum is dissected away at its lower part, we immediately discover the hæmorrhoïdal plexus, and this said plexus forms a continuation and anastomoses, above, with the internal hæmorrhoïdal veins, below, with the external ones, and in the middle with those which lie between both. The interior surface of the rectum has this hæmorrhoïdal plexus inlaid outside of its internal coat; and when its branches are dilated in this part, the internal coat is marked, indented or impressed, as it were, within side by them; it becomes thin, and takes on a bluish appearance, in such a way that it would seem as if the dilatations projected into the intestine, without any of the proper membrane intervening; in short, the last seems scarcely to have any existence. Nevertheless, if we carefully dissect away the internal or mucous coat of the intestine, we immediately fall in with the individual membrane of the dilated part of the plexus.

On the exterior surface the hæmorrhoïdal plexus is inlaid on the internal sphincter muscle; but it appears to me of importance to remark, that tolerably large branches of the plexus detach themselves, pass through the muscle to its back, and immediately descend on its external face to its lowest edge, and communicate anew, as it were, with the lower border of the hæmorrhoïdal plexus. It thus happens, that the internal sphincter muscle, in persons violently attacked with piles, is traversed, and in a certain degree embraced, by many large veins, so much so as to give it a cavernous aspect. This disposition, however, is scarcely apparent in the dead bodies of persons, who, during their lifetime, had not been troubled with the piles.

It ought further to be remarked, that the hæmorrhoïdal plexus, and the veins which give it existence, are more or less dilated and varicous in the immediate neighbourhood of the piles themselves.

I have forced air into the inferior mesenteric vein, by means of the blow-pipe, when the hæmorrhoïdal plexus became distended, and the cellular structure of the inferior portion of the rectum has become emphysematous.

Spirit of turpentine, coloured black, has been thrown into the same vein, and it passed into the hæmorrhoïdal plexus, and it also instantly filled the cellular texture of the margin of the anus.

When the hæmorrhoïdal veins become distended and dilated by the blood, the result is, that they become varicous; but if the blood, by any cause, instead of returning by these veins, descends and diffuses itself at the inferior and internal surface of the anus, into any cells of the cellular structure, communicating with the hæmorrhoïdal veins, the result is a pile: thus, then, the dilatation of the hæmorrhoïdal veins gives origin to varices, and the blood issuing from these vessels, diffused in a cell of the cellular texture, at the inferior part of the rectum, or at the margin of the anus, is the cause of the pile, properly so called.*

If we dissect the inferior mesenteric vein of a subject having the piles, we find its ramifications to terminate in these pouches of blood. If we detach and completely remove the whole, the piles remain suspended to the branches of the hæmorrhoïdal vein, in a similar manner as the grapes are to the general branch.

These little sanguineous tumours are often the seat of a state of hæmorrhage, and also of violent pain. If they open themselves exteriorly, the blood is evacuated, and the patient relieved till the next attaek; but if the piles are seated internally, and they pierce into the rectum, the blood is diffused into it, and passes away by the anus: in this case, however, the excrementitious fluid may drain through the ulcerated orifice, enter into the pile, inflame it, and produce a kind of small depôt, and thus

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* That there are two, if no more, species of piles must be well known to any person conversant with the subject; the one is a simple dilatation, but the other is of a firm and fleshy structure, and appears to have been the result of a particular kind of adhesive inflammation, distinctly resembling in its internal action and effects, the pimples which enlarge the end of the nose: but not like this last, inclined to enlarge indefinitely, and heap new formations on those already accomplished. The fleshy pile continues defined in its size, which never becomes large; and after it has existed awhile, it would seem as if the adhesive and accumulative inflammatory action had ceased, and its remains give no farther trouble. The remains of old piles are found near the external verge of the anus; but oftimes they seem to be simply disused pyriform bags, or shrivelled skin. It would hence appear, that adhesive inflammation contrives to shut up the communication between the internal vessel and the external pile.—T.

give origin to the fistula in ano. In one hundred cases of fistula of this part, ninety-nine are formed by this procedure, and have their origin from this cause.

After having carefully examined and verified the state of the parts in the large number of dead bodies, which have fallen under my researches during the space of twenty-five years, I have met with seventy-five having had fistula in ano, but who had died of other diseases.

I endeavoured, in the first place, to ascertain correctly; the precise situation where the internal orifice is seated, secondly, the course most ordinarily followed in the march of the fistulæ; and what were the parts through which they travelled.

So far as respects the situation of the internal orifice, I have the most commonly found it a little above the place where the union is effected between the membrane lining the rectum and the external skin; sometimes also a little higher up; but the opening is never seated above five or six lines high; at least in every one of the seventy-five dead subjects in which I have found fistula, I have never found one internal orifice to exceed this height, and in a certain number, it was at most only three or four lines up. The opening itself appeared as if ragged or torn; in the greater number it was soft, but hard and callous in a few.

The precise course run through by the fistula was a little variable: in many cases I have seen them, after having taken their origin in the interior of the rectum, descend between its mucous membrane and the internal sphincter muscle. When they have arrived at the inferior part of this muscle, they take a detour and pass between the external sphincter and the skin, and proceed to form an opening in the neighbourhood of the margin of the anus. In many other cases, the fistula passed through the fibres of the internal sphincter muscle, descended immediately between it and the longitudinal fleshy fibres of the rectum, bore down, on the superior face of the external sphincter, passed through its fibres, and then proceeded to ulcerate its way through the skin, at a greater or less distance from the inferior extremity of the rectum. But in a sufficiently large number of the subjects, the parts through which the fistulæ made their way, were so much disorganized and confounded together, that it became impossible to determine their precise course. In all these subjects also, the course of the fistula was lined by a membrane accidentally formed,* extremely thin,

* An opinion has been more commonly entertained, in England, that this kind of lining is the necessary, rather than the accidental, attendant of fistulæ, particu-

smooth and uniform in its texture, and seemingly destitute of any villosity. The result of these researches has convinced me that, in nearly all cases, the fistula is effected in a pile, and sometimes that its passage is determined by some vein of the hæmorrhoïdal plexus.

After these data I think I shall run no risk in affirming, that we ought to be able to discover the internal orifice of the fistula, in most cases, by a single glance of the eye. For this purpose, the patient must be desired to make a slight effort as if to evacuate the bowels, whilst the surgeon at the same moment separates the sides of the anus with his fingers; and, almost always, the little ulceration marking the internal orifice immediately makes its appearance. If we cannot perceive it, it becomes necessary to recur to the probe to discover it with precision; and this means will commonly be successful, except in the hands of an inexpert practitioner.

The idea so generally prevalent, that the internal orifice is very high up, has led the surgeon to direct the end of his probe too high, and the number of attempts to pass it forward, have corresponded with the supposed extent of the denudation. Moreover, the cellular texture of these parts is of so lax a structure, that it is easily, in most cases, penetrated by the stylet or probe; hence, the more easily these instruments pass upwards, the higher up we are disposed to think the internal orifice to be placed: whereas, in that case, it must be a chance indeed if we find it.

The following appears to be the most easy method of following the course of the fistula, and arriving into the rectum with the greatest precision. I have already remarked, that the internal orifices of the fistulæ, are generally situated about the distance of five or six lines above the lowest portion of the intestine, but

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larly after they have existed long enough to afford time for its formation: and it was believed, and probably with reason, that an operation stood a much better chance of being successful before this membrane was formed. Were the assertion of our author, that fistulæ are so easily curable, or that they will easily in many cases admit of a spontaneous cure, in every respect correct, we are of opinion that medical men would not so often be consulted respecting fistulæ of five, ten, fifteen or twenty, or more years duration. Perhaps, after all, the fault lies in the deficient experience of the English surgeons in this particular, and this deficiency is rather to be attributed to their want of sufficient opportunities of studying the disease; and to our having no work in our own, or perhaps any other language, which contains any lucid arrangement, or regular and defined account of the disease and its cure, than to any want of attention to, or intelligence respecting the nature of, the subject.—T.

more commonly less; and that they then march a greater or less distance between the external sphincter muscle and the skin; hence, if we direct the point of the stylet too high, when it is introduced into the fistula, we shall never arrive into the rectum. It will be necessary then, by consequence, in order to accomplish our purpose, to carry the stylet or probe horizontally and almost parallel with the peritonæum, particularly in the female; though, it must be recollected, that in the male it must be directed a little more upward. When we have arrived into the fistula, the button of the stylet or probe must be slid along the internal face of the skin, without ever leaving it; afterwards it must be directed along its lower side towards the lower portion of the rectum; and by this procedure, the internal orifice of the fistula, and the finger introduced into the intestine to meet it, will readily be found. If the patient be placed in a proper position, and we mean to operate at that time by incision, we must gently bring the end of the canulated probe or director, carried through the fistula out of the anus, by giving it a proper degree of curvature; after which we must slide the point of the bistoury along its channeling, with its edge towards the anus, and forthwith divide the teguments from one end of the fistula to the other.

In conclusion I can venture to affirm, that the internal orifice of the fistula is always to be found very near the anus, and at the lowest part of the rectum; and that we are not to operate when the probe will not enter the rectum through an internal orifice; and that there is no need to disquiet ourselves concerning any denudation of the intestine, when the two orifices of the fistula are included in the incision. In the case of a fistula opening externally, the denudation is never very extensive, nor is the cellular membrane sufficiently dissolved away, that we need despair of a subsequent union of the intestine with the surrounding parts; and that, according to the opinion of Sabatier, we need never in this case divide the intestine.

Baron Larrey first adopted Desault's method of operating on fistula in ano; but having gone through an extensive course of practice, he had frequent opportunities of observing the disease; and also to assure himself that, in almost every case, the internal orifice is found in the lowest portion of the rectum. He had, in consequence, thrown the same light on this operation as he has so brilliantly done on a great number of points in surgery; and he reduced the instrumental part to a straight bistoury, the same as Sabatier. He replaced the ordinary tube by a canulated director, made flexible, and buttoned at the end, which renders the operation extremely easy, and has brought it to the last pitch of perfection.

After what has been said, we see that the fistula in ano is a disease most commonly of little importance, and the operation for its cure is one of the simplest in surgery. The time is passed away when the disease was considered as one of the most serious nature, and the operation as one of the most cruel, and also of the most dangerous cast. This disorder is very common, particularly in persons afflicted with piles; and many labour under it without suspecting it, and are often spontaneously cured. In almost all cases, nothing ought less to disquiet us than the disease, or the operation necessary for its cure.

Whatever be the number of the external openings, they effect no change in the situation of the internal orifice.

F. RIBES.

In taking a review of this paper, two or three remarks present themselves to our consideration.

A general opinion has obtained possession of the minds of medical men, in England at least, that a fistula of any tolerable degree of age, is universally liable to form a membranous lining as a defence to the surrounding cellular membrane, and that this lining must necessarily impede if not prevent a cure. The existence of such lining has perhaps rather been inferred than known to exist from the regular appearance of that lining of the external orifice, which, almost if not always takes place in old fistulæ. The observations of M. Ribes seem to render the existence of such a membrane doubtful, in the generality of cases, though he admits that it does exist in others, where there is great disease of the circumjacent cellular membrane, but he by no means clears up the circumstance. The existence of this lining membrane of the interior surface of the fistula, has been supposed to be necessary to the welfare of the surrounding parts, and set up by the lax cellular membrane, as a barrier to future sinuous encroachments; as if the cellular membrane were aware of its inability to resist them. Dr. Ribes so seldom mentions any such cases, that it would have been highly gratifying had he spoken expressly on the subject.

We are sufficiently aware that the recent fistula is often and easily cured by incision, but not so well assured that such is the case with the old one. Indeed it is astonishing what a number of old fistulæ are to be met with in London, many of which are of several years duration; and possibly two causes mainly contribute to this continuation of the disease. The English are extremely averse to expose any disorder of this part, and from

their not being able to see, either the part affected, or the actions of the surgeon, feeling also a good deal of pain both from the piles which caused it, and the fistula itself when formed, they can rarely be induced even in slight cases to suffer a proper examination of the state of the parts; much less an operation. Further, the lucid acquaintance with the subject displayed by our author, can rarely be in the possession of the great bulk of medical practitioners, and by consequence, betwixt the timidity of the practitioner and that of the patient, the fistula goes on from year to year, and is left entirely to the efforts of nature.

Our author has omitted to make mention whether any fistula, containing the smooth lining he speaks of, were ever submitted to his care in the living subject; and whether there was any greater difficulty in effecting a cure on them, than in other cases. In fistulæ of old standing, the practice of the late Martin Van Butchell deserves notice, though little known as his, at least, either to the public or medical men. His plan was to introduce a hard twisted silken cord, of no great thickness, through the fistula into the intestine, and tie the two ends together on the verge of the anus; as tight as the patient could conveniently bear, and with a slip knot. In four or five days, when the ulcerative inflammation has removed a sufficient portion of the upper edge of the interior opening of the fistula, to slacken the silk; he lightens it again, and so on, from one four or five days to another; till the silken cord finally drops away of itself, when the patient is cured.

The long duration of fistula in ano must either, in the first place, result from the newly formed lining of its interior surface, above alluded to, being the only effort which the parts are able to effect, but which do not amount to a cure, and with which they are content, as being for the present, at least, defended against any farther encroachment. In the second, from the diseased, and as it were dissolved state of the circumjacent cellular texture, not enabling them to set up and carry on healthy actions and granulations; or, in the third, from the surrounding cellular texture, though not greatly diseased, being unable, from some cause or other, possibly enfeebled action, in a set of vessels and cellular structure, possessed of little of the principles of increased action, to set up and support healthy granulations, whereby a general union of the parts affected with the disease may be completed. Under such circumstances, in old fistulæ, the cure is delayed by want of increased adhesive inflammatory action, and its consequent effect, in deep wounds at least, granulations. This want of action can also prevent or impede the rapid and healthy growth of the proper uniting granulations, even in a

fistula which has been operated on: and the slowly resulting cure of which, has given great cause of complaint on the part of the patients. If all these cases be considered, can we conceive a more likely method of raising the granulatory action than the long but gently continued stimulus of Martin Van Butchell's silken cord. If we recollect right, silver wires were used in this way by the earlier surgeons, but to these there are perhaps many objections, as they may not excite so much inflammation as a cord of silk. The practice deserves trying in old fistulæ.

The author has not at all mentioned a kind of idiopathic fistula, which takes place in the cellular membrane, at a more or less remote distance from the rectum; and which appears to be the result of an attack of fever. Possibly some state of the hæmorrhoïdal vessels may give cause to this particular part being chosen to bear the inflammatory brunt, which so commonly attends the first days of common fever; but sometimes it is situated at such a distance as to lead one to suspect that the hæmorrhoïdal vessels have little to do with it; and besides, in such cases, after the breaking of the phlegmon and discharge of its contained matter, the probe passes directly forward in the line of the orifice, not having, to appearance, any necessity to turn, either to the right or left.

The course of such complaint is this: On an attack of fever, pain is felt nearer or farther from the rectum; the inflammation is evidently of the phlegmonous cast, it speedily enlarges and extends inwards; a projection soon takes place externally, and by the time it has arisen to such a size, as to lead one to suppose, from its external appearance, that the whole may be the size of a pullet's egg, the skin becomes thin and bursts. The matter, at first of a good consistency, in the course of days or weeks becomes sanious; the whole interior becomes so contracted as scarcely to admit a probe; the external orifice appears as if lined with a peculiar and newly formed membrane; the disease becomes more or less quiescent, but every now and then an external healing of the external orifice takes place, and a fresh collection of matter arises; which, though seldom of any quantity, say that the whole may or may not fill a tea-spoon, yet pursues the same course as its prototype, and thus the disease continues exhibiting successive attacks for years. Or otherwise, if not so, new ones form, which, from not readily seeing the parts, the patient may not accurately distinguish one from the other; but most probably it is the old one which thus fills and breaks, and so torments him for a long time. In a case where this formation is rather remote from the intestine, will

incision of any kind, or any dilatation, be of service? Do these effect, or have they effected, a cure?—T.

The opinion of Dr. Ribes, on the particulars spoken of in our remarks, would be esteemed a treat; and should they fall into his hands, we hope he will so favour us as to communicate his thoughts thereon to our work, for the inspection of our readers.—Ed.

Art. II. *A short Account of some of the principal Hospitals of France, Italy, Switzerland, and the Netherlands; with Remarks upon the Climate and Diseases of those Countries. By H. W. Carter, M.D. F.R.S.E. one of Dr. Radcliff's Travelling Fellows, from the University of Oxford.* London, Underwoods, 1819.—pp. 267.

Medical Notes on Climate, Diseases, Hospitals, and Medical Schools, in France, Italy, and Switzerland; comprising an Inquiry into the Effects of a Residence in the South of Europe, in Cases of Pulmonary Consumption, and illustrating the present State of Medicine in those Countries. By James Clark, M.D. London, Underwoods, 1820.—pp. 260.

Had the former of these pamphlets supplied materials for an interesting article, we should sooner have presented it to the notice of our readers; and did the latter furnish an ample store, we should not have coupled it with a work, from which we are afraid it will, neither by contrast nor by reflection, obtain any considerable lustre. They both, as the titles express, include the consideration of various subjects, which, however, may properly be arranged under two heads:—1st. Remarks on the climate and diseases of some of the most favoured parts of the Continent of Europe, with a peculiar reference to the effects of a residence in a southern climate in cases of consumption; and, 2dly, Notes on some of the hospitals and medical schools of the countries brought under review. We shall adopt the arrangement thus afforded us, and under each head endeavour to extract whatever is likely to interest our readers.

We turn to the former of these subjects with the greater interest, as, in one of our early numbers, we endeavoured to introduce it to attention. We then dwelt on the defective information generally possessed; on the difficulties that lay in the way of its increase; and we earnestly called upon those who

were favourably situated, to supply a deficiency so severely felt by the profession and the public.

In the first of the Treatises before us, this subject is introduced as a supplement to the remarks on the other branch of the inquiry; in the latter it is assigned the most prominent place—but even here, we look in vain for much that we could have desired. There is no discussion concerning "*principles*—those living and productive things," which it is the fashion now-a-days so much to neglect, but which ever direct us towards truth, and safely conduct the cautious follower through a thousand difficulties. We have no general survey of the "wide world before us," and many of the places now rising into the greatest repute are altogether omitted. But we are about to forget the pretensions of our author, and of his work. Than these nothing can be more modest. In his preface he apologizes, first, for appearing at all; and secondly, for the indifferent part which he may be considered as performing. In encountering these professions in the first page of a goodly octavo, we were inclined to think that this diffidence was misplaced. So far as regards the former part of the Treatise, this is still our opinion; and we have much pleasure in thanking Dr. Clark for the contribution he has made. There may not be much that is new in the "Notes" before us; but we are furnished with the remarks of a sensible man, who has travelled much, and who has carried about with him the true spirit of investigation—who has possessed himself of accurate information, and communicated his observations with a candour that is sure of being listened to.

Neither of the authors before us say any thing of the merits of the favourite residences in our own country, as compared with those abroad; nor, in truth, do they enter into any abstract consideration of the influence of climate in producing or removing the symptoms of consumption. We have not been able to discover the opinions of our university traveller on these subjects,—those of Dr. Clark, so far as they regard some of the points, may be learned from detached observations in the course of his work.

And first, and most at length, we have some of the points discussed under the head of NICE:—"What are the effects of the climate of Nice upon patients labouring under pulmonary consumption? Is the practice of sending such patients from England, to pass the winter in this place, founded on certain experience of its utility? or is it not rather, taking into consideration the disadvantages of so long a journey, in many cases injurious?" If it should appear, continues our author, that more injury than benefit may be expected from the practice, it

may excite surprise that the practice has continued so long. And yet, when we consider the fate of Montpellier, the most unfavourable issue of our investigation ought, perhaps, to create less wonder than we might be led to entertain. "For my own part, I have no hesitation in expressing my belief, that, before many years, the English physician will no more think of sending his consumptive patients to the latter place than to the former."

Our author founds this opinion not merely on what he himself had seen, but also on the statements of others. He tells us, that "*no one*, so far as he knows, has given his opinion in favour of Nice, as a climate in pulmonary consumption; at least, where that opinion was founded on actual observation." And immediately after, "amidst this difference of sentiment" (which, according to this account, we cannot discover), he gives us the opinion of a very superior man, who has paid much attention to the subject—Professor Foderé, of Strasbourg. The Professor considers the fatality as owing, not to sudden variation of temperature, but to some other source of evil—to the impregnation of the atmosphere with some of the muriatic salts of the neighbouring ocean. He had seen very many cases terminate fatally at Marseilles, which he was inclined to attribute to the very dry and keen winds of that place; "but I afterwards found that the warm, softer, and more humid atmosphere of Nice was in no respect more favourable to such complaints." And in a conversation with our author he remarked,—"There is one thing certain, Sir, you may assure your countrymen that it is a very bad practice to send their consumptive patients to die at Nice." This opinion, says our author, when added to the observations I have had an opportunity of making myself, "leave little doubt on my mind of its being at least *useless* in *any* stage of the complaint, and worse than useless in the latter stage of pulmonary consumption."

Thus much for Nice.—But, alas! it has reference not merely to this spot; for in comparing its climate with that of other places, as depicted by our author himself, we cannot find much, we may say any thing, which shews that a better can be found. Villa Franca, "though much more sheltered—sheltered effectually from the northerly winds, and possessing a higher temperature," must share the fate of Nice; but why—we have yet to learn. Pisa is not protected from the north-east wind: its climate is very variable, and subject to high winds in the autumn and spring. Compared to Nice the average temperature is lower. Even the artificial climate made by the buildings on the northern bank of the Arno is "of very doubtful utility." Will it be believed that, after this, it is recommended as vastly

superior to Nice? Hieres is not so good as Nice, though it is the best place in the south of France. Than Marseilles, "a more improper place can hardly be selected." "Without having adduced equal evidence on Naples, I am nevertheless of opinion, that it is as bad as either Nice or the south of France." And lastly, with regard to Rome, the selected residence of our author, it receives but faint praise. As, however, he thinks it preferable to those generally recommended, we must examine the grounds of his preference. We have first an account of the season 1818-19, our readers will remember an unusually mild one, as observed by our author. The account is far from being particular, and is drawn up without any register of the weather: it is such an one as might be safely delivered of any of the places brought under review. Here we read of sharp northerly winds (Tramentaria).

"The northerly, and north-westerly breezes, which occasionally blow pretty strongly, felt rather cold; but *as far as I could trust to my own feelings*, they were not to be compared in frequency or effect to the keen chilling winds of Nice, at the same season. The climate of Rome is more moist than Nice and the southerly parts of France." "The dry cold winds experienced at those places are comparatively little felt at Rome. The greater part of the town lies low, and *is tolerably well sheltered* by the surrounding rising grounds from the northerly winds." "The tramentaria is frequently felt at Rome with considerable severity, and during the winter the climate is, without doubt, colder than at Nice." "It is chiefly during the spring months that Rome has the advantage, being less liable to the keen cutting winds of the places I have already noticed. This, however, is an important circumstance. All that I wish to be understood is, that Rome is less liable to those winds than most places I have seen. The air has a softness that I have never felt in the south of France, or at Nice. Rome is a dangerous residence to the patient who will not consider himself strictly as an invalid. He cannot enter with impunity into those amusements, from which he was prohibited at home. The stair-cases and lobbies are large and open. Many of the streets too in Rome are damp and chilly, and the alternation between those shaded streets and situations exposed to the sun, is often very great. On this account the open carriages so much in use at Rome are very dangerous to the delicate, and close carriages should be alone used. St. Peters, from the immense body of air it contains, is *always* mild, at 60°, and safe for the invalid."

On these grounds, stated certainly with much candour, our author, to our astonishment, "strongly inclines to think Rome a preferable situation, for the generality of consumptive patients, to those that are commonly recommended." But presently forgetting this strong conviction, he arrives at his conclusion by

saying,—"By attention to these hints (cautions previously given), I am inclined to think the consumptive patient may pass the winter at Rome *fully as well* as at any other part of Italy, and perhaps better."—And is this all? The patient may pass his time at Rome as well as at Pisa or Nice, for example!! Even in this conclusion, we are afraid we cannot join.

All this is very discouraging. At this step of our progress we find ourselves, as it were, thrown back on the initiative—on the important question of the effect that climate produces on health and disease. Till we arrive at some conclusion here, we wander in endless mazes lost. Our author does not meet this question; but nothing can be more melancholy than the sentiments he, in a cursorily manner, delivers concerning it.

"It appears to me, that a change of climate is much more beneficial as a preventative of the disease, than, I fear, it will ever be found as a means of curing it when formed. In the young and growing members of delicate families, however, continued for some winters, when there is the greatest danger, it may have much influence in checking the tendency to hereditary disease. Even when tubercles already exist in the lungs in a state of irritation, a residence of some years in a mild temperature, together with the adoption of a proper regimen, may be the means of allaying the irritation, and consequently of preventing the suppuration of tubercles..... When, however, suppuration has actually taken place in the substance of the tubercles, my opinion is, that little or no benefit is to be expected from the change of climate in the cure of the disease."—p. 116.

Cernis ut e. molli sanguis pulmone refluxus
Ad Stygias certo limine ducat agnas.

"In every climate, and under all circumstances, pulmonary consumption, when once fully formed, I fear will be found to justify the character here given by Ovid. Its course may be more or less rapid, but its termination is ever the same."

Once established then, the disease is irremediable—the patient's fate is sealed. He may bid an everlasting adieu to hope, and lie down with despair. This being established, he may indeed be *as well* at Rome as in any other part of Italy.

We rejoice from the heart that such are not our views of the subject. We know of nothing so likely to produce the end so much dreaded, as the adoption of these sentiments. Were we in the midst of an impoverished manufacturing district, whose crowded and diseased population, fixed to the soil, was ill clad, and worse fed, we should be far indeed from entertaining these dismaying, we had almost said these destructive opinions. And does comfort, and wealth, and opportunity, provide us with no additional resources?

Here then is the great point to which we have been hastening our steps, and on which we are persuaded turns much of what is most important in medicine, much of the welfare of many of our fellow-men, and all that is of consequence in the question of foreign residence. Consumption is perhaps, of all others, the most insidious disease. It can never be conclusively maintained to exist, till the suppurative stage is present. Physicians, till this decided symptom appears, will ever keep the patient under their immediate care and inspection, and many of them are in the habit of doubting even after this has evinced itself. Previous to this, friends will not recognize their relative as consumptive; but before this, according to our author, the die is cast—the case is hopeless.

The lungs we are persuaded are sometimes irremediably gone, before the patient or his friends are even aware that he is the subject of disease. A certain proportion of cases then, we believe, are from the first beyond the efficacy, if not the influence of medicine. But even in these cases, we should consider it our duty not to abandon hope. We would rather adopt as our motto, that beautiful epitaph on a monument, we think, somewhere in Wales, "Hope, stranger, hope—though the heart break, still let us hope." In a great number of cases, however, the condition of the parts is widely different. Some decided and powerful cause has been induced where it was not before present. The girls in St. Thomas's school, Dublin, were from some accident deprived of their play-ground. They were healthy when they entered: they remained so while they enjoyed their out door amusement; deprived of this, in a short time nearly one third were the martyrs of scrofula.* We are not without example, says Richerand, of those who have escaped scrofula in youth, becoming a prey to it in a dull age. Patients are sometimes sent to the l'Hôspital St. Louis from La Conciergerie, who, by the constant cold and damp of that prison, labour under a general swelling of the lymphatic glands. These cases of scrofula are of difficult cure, and almost always mortal:† we suppose from phthisis. So much for the quick production of the disease, by a thousand causes of every day occurrence. One remark as to the possibility of a cure. The Trinidad cachexia, arising from marsh miasmata, though not dwelt upon by systematic authors, cannot be unknown to most of our readers. Dr. Skey describes it as peculiar and refractory. It sometimes supervenes on the fever of the climate, sometimes

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* Carmichael on Scrofula, p. 25. † Nosog. Chirurg. tom. I. p. 171.

arises spontaneously. The patients are pale and sallow, with much breathlessness and debility. They are bloated in appearance, and occasionally pit upon pressure. Pulse about 120, and quickened prodigiously on the slightest motion. Appetite indifferent; bowels regular; motions pale; belly rather prominent. On dissection, among other things, serum is found effused into the thorax, pericardium, and sometimes abdomen. The lungs are uniformly diseased with tubercles and vomicæ, the mesenteric glands are enlarged; sometimes the spleen and liver are enlarged. This is a bad enough complication of disorders, yet we know that many of those far gone in this complaint recover; many in this country, after cough has supervened, are brought round.*

Thus, unwittingly, do we find ourselves in the discussion of a principle which we hold to be all-important in this subject, but which we had fully intended not to have introduced at present. We feel desirous, in opposition to the statements of our author, again to maintain the opinion, that tubercular phthisis is not necessarily fatal—that suppurating tubercles may be opposed and overcome. The prevailing mode of treatment, indeed, abets rather than prevents the tendency to death; but under judicious treatment great things have been done, and we trust still will be done in this complaint.

We the less regret having introduced this opinion, as we trust it will in some degree tend to neutralize the dreary and desponding influence which the author has contributed to extend. Seeing that this despairing creed is his, we the less wonder at some of the other statements which he makes. He allows that during three of the winter months, the climate of Nice is all that can be looked for; and yet this is counted for nothing in the treatment of consumption. The richly cultivated garden, which he describes: the enchanting country, on which he expatiates; the exhilirating breeze, the constant spring, the brilliant skies—this, for three months, is nothing. In the same spirit we see him alarmed at circumstances which could hardly produce much apprehension. It is unsafe on account of the north winds for the patient at Hieres to venture out of doors, except into some corner, where he is exposed to the sun's rays, and completely sheltered from the north. The same is the case at Nice, where "the currents in traversing the streets" are sedulously to be avoided. The same we have seen is strongly re-

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‡ See Dr. Lempriere's Report of the Aluminous Chalybeate in the Isle of Wight, p. 65.

commended at Rome. Were people in health to follow these directions, we should be afraid of their becoming ill. Well defended fresh air and active exercise are most important.

The truth is, that excellence of climate is a relative term; and if any one expects to find a spot in which there may not be a cloudy day, and a cold evening, he will be disappointed. Nor is it merely the quantity of positive cold that is to be taken into account, but also the variations of temperature. It is an opinion, as old as Herodotus, who, speaking of the uncommon healthiness of the Egyptians, remarks, that we must attribute almost all the diseases of mankind to the rapid vicissitudes of the season. Now there cannot be a doubt, that in both these respects the southern latitudes have great superiority. With regard to positive cold, no question can be entertained: and with regard to sudden variations, we imagine there can be as little doubt. This may be decided by every one's experience, and by the marked diversity of the prevailing diseases. There is less consumption in Italy than in England, and in Egypt and the West Indies it is nearly unknown.

We trust that in the foregoing remarks our meaning has not been misunderstood. Most thoroughly do we concur with the feeling and forcible remarks of our author, as expressed near the close of this part of the subject.

"For my own part, I have seen enough to convince me that it is not only a very useless, but often a very cruel thing, to banish patients in the very advanced stages from all the comforts of home, and send them forth to undertake a long journey through a foreign country, deprived probably of all they hold dearest to them, and without those thousand nameless comforts, by which the watchful care of friends may cheer the last period of a hopeless disease. The medical man that reflects on the distresses that such patients must be liable to during such a journey, arrested perhaps in their progress by the increase of those symptoms which attend the advanced stages of consumption—in very indifferent accommodations probably, and far from any medical advice in which they can confide,—will surely long hesitate ere he condemns the fated victim of this remorseless malady to the additional evils of expatriation."

Our object has simply been to rescue the case of the phthisical from absolute despair,—to impress that there is a chance for life. This being allowed, we turn with infinitely greater interest to the consideration and claims of the different residences abroad.

And first: of *Bourdeaux*, *Lisbon*, and *Marseilles*. Did we not every now and then hear of patients and families resorting, nay, we are sorry to add, being sent to these places, and returning disappointed, we should not think of troubling our readers

with any remarks upon them. A certain degree of advantage will unquestionably be obtained, but wherever climate is an object of importance these towns are not for a moment to be thought of. They may be put, we conceive, very much in the same rank; and we are sure there are not wanting testimonies against all of them. "I cannot help thinking," says Dr. Carter, "that the climate of Lisbon is far from being the best we can fix upon for persons affected with pulmonary consumption. In spring and autumn the variations are sudden and great. They are attended by dense fogs and long continued rains. In winter there is much cold bad weather, and cheerful fires are not to be found. The dirt and stench of Lisbon are extraordinary, and to an Englishman scarcely tolerable."—p. 147. "Upon these accounts," is elsewhere observed, "I am persuaded, and my opinion is in unison with that of other physicians who are acquainted with the climate of Lisbon, that it is improper for phthisical patients."—p. 142. Other parts of Portugal may be better; we are as yet, however, unacquainted with them.

If any thing is necessary to convince our readers of the impropriety of *Marseilles*, as a resort for the phthisical, it will be abundantly supplied by Dr. Clark's account of it. He mentions that he had here met with several consumptive patients. We can hardly believe, after all that has lately appeared on the subject, that any of them can have been sent out by a medical adviser. He proceeds to shew, "that a more improper residence could scarcely have been selected;" and so much convinced are we that this is the general opinion, that we think it unnecessary to give any of his statements.

Remarks not much less decided, may we believe, be made of *Florence* and *Naples*. On a former occasion, to these two places we joined Rome, not as the author of the "Notes" supposes, because we believed them to be under the same circumstances with respect to local situation, but because it was our impression that their advantages and disadvantages to the invalid were not very dissimilar. As it happened, we had visited these places, and could not be ignorant of their local peculiarities. "The winter of 1817-18," says Dr. Carter, "at Florence was cold and moist..... Upon the whole, I thought that the climate of Florence in winter was almost as changeable as our own, and though the cold may be far less than it is with us (snow rarely falls at Florence, and it never lies upon the ground more than a few hours), yet as it alternates with a temperature equal to that of our finest days in spring, it is as sensibly felt, and as likely to do harm to those who are not in good health. In summer, Florence is considered very healthy, the atmosphere

being clear, and the temperature steady, and not remarkably high." "The opinion I have given of Florence is universally received; and it was an observation of Bicchierai, a physician, who wrote upon the baths of Monte Cattini, that he wondered how any body could live at Florence in the winter, or die there in summer.—p. 91. 2.

Of *Naples* neither of our authors say much. In fact Dr. Clark, never having visited it, speaks merely by hearsay; and on its climate, Dr. Carter gives us only five or six lines. Their accounts, however, somewhat vary. Our readers will remember that we before mentioned, that ice and snow are sometimes seen here; and Dr. Domier, we are informed, often found the difference between day and night as much as 20°.* Dr. Clark thinks he will not be far wrong in stating it as similar to Nice. "So much are cutting winds felt during the spring, that I have heard it as a remark by some Italians themselves, that Naples was the warmest situation in Italy during the winter, and the coldest during the spring. I have never yet met one medical man or consumptive invalid, who had been there, who gave a good report of it, while I have met several who have given a bad one."—p. 86. Dr. Carter, a personal observer, speaks much more favourably. We perceive that Evelyn, in his "Memoirs," mentions that in his time they cultivated canes for sugar near the town.† A good account of the climate of Naples from a resident, appears still to be a desideratum. We trust that some of our friends now settled there will supply it.

Of *Rome* we have already said a great deal: indeed we believe we have delivered all Dr. Clark's statements with regard to it. From these we have seen that he would advise consumptive patients to make the fallen mistress of the world their residence, as he has chosen it for his own; and we verily think that his presence ought to be an additional inducement. We believe Rome to be a very good residence for the phthisical, and we have much pleasure in standing corrected by the author of the Notes. In the midst of very great scarcity of materials respecting Rome, we honestly presented what we could obtain. Our university traveller would say of the climate of Rome that it was a good one. In 1814-15 he passed three months there, and in 1818 sojourned there in February, March, and April. Both seasons were, upon the whole, mild. In the course of the former, snow fell once or twice, but it did not remain upon the ground; and in both there were occasionally heavy rains; but

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* Dr. Young on Consumption, p. 100. † Vol. 1. p. 137

the intervals of clear mild weather were frequent, and of long continuance. Whenever the atmosphere was clear, he knew of no climate more pleasant than that of Rome, in winter and spring. We have lying before us a letter from an invalid, than whom, from long and dear bought experience, few can be better qualified to judge, who says, "I have spent some winters at Rome, and can say from my own experience, and that of several other invalids who were there at the same period, that it unites more advantages than any other place resorted to by consumptive patients." In the extracts we have given, Dr. Clark notices several of the unfavourable items, though others might without difficulty be added to the list. The best residence, he remarks, is somewhere about the Piazza di Spagna, which is well sheltered, and has the advantage of being close to the Pincian Mount, which affords the best protected and most delightful walk at Rome.

To *Heires* we have already alluded. We have mentioned, that it is far from being an unexceptionable residence. Dr. Clark's account corroborates, we believe, in every item, the character we before assigned to it. It is beautifully situated; and the vegetable world, no bad criterion, here assumes a very rich and varied dress. The accommodations for invalids are not numerous nor comfortable; but the country around is open and fine; and when the weather is fine, the invalid may enjoy excellent rides through a beautiful and varied country. The situation is regarded as a damp one; and though better sheltered than any other part of the south of France, still it is much exposed to the cold northerly winds.*

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* In a note, Dr. Clark kindly tells us that we "have made a mistake" in calling the north-east wind the mistrale. If so, we have done it in good company. When we were first thrown in the way of having a good deal of this agent, we received contradictory answers to the queries we made concerning it. In perusing Dr. Davis's account of Nice (London, 1807.), we there saw the mistrale defined to be "a north-east wind;" and the intelligent author of a paper on "the temperature of Nice," in the "Annals of Philosophy," 1818, is not less distinct in his statement. "I occasionally observed," says he, "by the motion of the clouds that the mistrale or bize (a north-east wind, so well known in Provence), was passing over our heads, whilst the mild breeze from the sea was blowing upon us (Vol. xii. p. 171.). Our own impression, derived from experience as well as hearsay, was, that the north-east was the most severe, and the mistrale; that the north-west, not a great deal better, was the bize. Saufrune, we see, defines it a north-west wind (Voyage dans les Alpes, Tom. vj. p. 154.). As at Rome, the tramentaria is a northerly wind, whether coming from east or west; so probably, it is in Provence, with regard to the mistrale.

Concerning *Nice*, we do not see reason to change the opinion we before delivered. That there are cold winds in spring cannot be doubted; but, from the locality of the place, as well illustrated by the note below, they are extremely different from those that are to be met with in almost every other situation. "All appear," says Dr. Clark, "to agree to the preference to be given to a mild and equable climate, which however is no where to be found."—p. 93. We wonder that Dr. Clark forgot himself so far as to prophesy that, before many years, Nice will be as much abandoned as Montpellier. Does he mean to say, that there is not a most marked difference in their climates? Much matter, altogether extraneous, is collected by Dr. Clark under the head of "Nice;" we are sorry we feel constrained to say, unfairly. Of this nature is Professor Forderé's speculation, which is not true of a thousand places that might be mentioned, and which Dr. Clark tells us, he himself "is hostile to." Surely the Professor does not mean to oppose the universally allowed statement, that there is not nearly so much phthisis at Nice as Marseilles. Of the same nature are the strong statements made by Dr. Sinclair concerning the fatality of the Mediterranean to seamen. These are very appalling, and Dr. Clark has no sooner allowed them to produce a most hostile impression concerning Nice, than he tells us that the cases of seamen navigating the Mediterranean seas, and of persons residing at their ease on its shores, "*are very dissimilar:*" we may add, not less so are the climates to which they are exposed. And to dwell no longer on this disagreeable part of our duty, Dr. Clark's anathemas against Nice very much resolve themselves, as we have seen, into dark unprofitable despairings with regard to the very last stages of consumption, which can be beneficial to no one. Nice possesses advantages which, we believe, will ever keep it in high repute. Its comparative nearness is not to be overlooked. The superiority of its climate during the winter is not a trifle.—"During the winter, the climate of Rome is, without doubt, colder than that of Nice."—Notes, p. 72. "The climate of Nice is considered very steady during the winter, and is as much so as most places on the Continent."—Ibid, p. 35. "The climate of Nice in winter (as opposed to summer) may be deemed one of the best in Europe. It much resembles that of Sicily (a high compliment, as we shall presently see), but perhaps the temperature is even more steady. Almost all the productions of Nice are finer than those of France or Italy."—Carter, p. 63.

We are quite willing that *Villa Franca* should share the fate of Nice, though it is allowed, on all hands, to be much more sheltered, and freer from cold and wind.

On *Pisa* we have nothing further to say, except that from our additional information, we should be inclined to agree with our author in thinking it was somewhat colder and less protected that Nice.

We are not aware that previous to Dr. Carter any author has recommended *Sicily* as a residence for the consumptive, though we are aware it has sometimes been resorted it. Dr. Southey has remarked that phthisis is not common in the island. "The climate of Sicily," says Dr. Carter, "is upon the whole a fine one, and likely to be of great service in those diseases for which persons are recommended to go to the south of Europe. I know of several people who had marked symptoms of affection of the lungs, and who derived much benefit from a residence in Sicily."—p. 119. Dr. Carter furnishes us with a thermometrical journal, which was kept in Messina, one of the coldest spots of the island, during most of the months of January, February, and April, 1814, rather a severe season. The situation and exposure are not mentioned. It was taken at 8 *a. m.* and 3 *p. m.*; and during these seventy-two days it appears not to have been under 47°, nor above 60°. This shews an uncommon steadiness of temperature. The island appears to be rather damp. In 1813-14 there was much rain, and snow fell several times. Cold piercing winds from the mountains too, we perceive, are not unknown. Dr. Carter considers Palermo better in the winter than Messina, and Catania perhaps better still.

Our readers are fully aware that these situations are recommended for winter residences: in summer they would be destructive. Hence the question respecting *summer residence*, which is shortly discussed by the author of the Notes. Dr. Carter seems to think that several parts of Sicily would afford safe and comfortable residences; but we would invariably advise an invalid to leave Italy during the summer, though we had been told, that if not Albano, Tivoli, or Frascati, the baths of Lucca or Seinna would afford agreeable and pleasant retreats. More correct probably is Dr Clark's opinion.—

"The only part of Italy which I have seen, where it appears to me that such patients as could not conveniently leave it might pass the summer, is on the banks of the Lake of Como. About Cadenabbia, or rather on the opposite shore, twenty-five miles up the lake, I should think the best situation. Here, sheltered by the hills from the intense heat of the summer's sun, and enjoying all the advantages which this beautiful lake affords him, the invalid, strolling along its banks, or gliding over the surface of its lucid waters, with the view of either exercise or amusement, might, I think, pass a few months safely and pleasantly."—Notes, p. 90.

The most common practice, however, and perhaps the best, is for those who have passed the winter in Italy, and mean to return thither, to go to Switzerland during the summer. This country is not free from faults, as a residence for the consumptive. Its climate is variable, and requires much care. The shores of the Lake of Geneva are generally resorted to. Vevey is not the most favourable situation. Lausanne and Geneva are better, though they are both exposed to the north wind.

"In the neighbourhood of Geneva the most favourable is on the northern side of the lake; but the town itself ought not to be chosen as a residence. Near Lausanne the most favourable situations are to be found on the low grounds near the margin of the lake. Here, indeed, the heat during the forenoon is frequently inconvenient; yet, upon the whole, it affords the best residence, being that which is most effectually sheltered from the bize."—Notes, p. 92. "The air of Mornex is recommended," says Dr. Carter, "as being milder and more pure than that of Geneva, and its immediate neighbourhood. Mornex is a pretty village at the foot of Salève, only a short morning ride from Geneva, where the invalid will meet with good accommodation."—p. 45.

Thus have we presented what appeared most likely to be generally useful. The information to be obtained, concerning foreign hospitals, in both works, is extremely meagre. We shall now extract such miscellaneous intelligence as we can collect—we may begin with a remark or two on phthisis itself.

Dr. Clark tells us that it is a prevalent opinion among *the common people* on the Continent, that consumption is contagious; and that he was not a little surprised to hear lately, that the clinical professor of one of the French universities was of the same opinion. This nevertheless is the general belief of the *faculty* in Spain and Portugal, and on the greater part of the northern shores of the Mediterranean. Does Dr. Clark forget that Dr. Darwin was decidedly of this opinion, and that the names of Heberden, Parr, and others, might be quoted on the same side of the question. "On the contagious nature of this disease," says Dr. Southey, "much has been written, and the weight of authority is pretty equal."* Does Dr. Clark not know, that some of our first physicians in London are of the same way of thinking. In fact, we have reason to believe that this opinion is now gaining ground; and our principal reason for introducing the subject at all, was to express a hope that an opinion, so entirely unsupported by any real evidence, might not for a moment receive the smallest countenance.

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* Southey on Pulmonary Consumption, p. 68.

Colliquative diarrhœa is often a most distressing and unmanageable symptom in cases of consumption. It is hardly less notorious, that travelling has a constipating effect on the bowels.

"This very general effect of travelling, led me to expect benefit from it in a case of diarrhœa, accompanying hectic fever in a consumptive patient, and on account of it I willingly allowed the patient to make a journey of several days. The effect was much more than I anticipated: a diarrhœa, which for six weeks all the usual medicines had failed in checking for more than one day at a time, yielded completely to this short journey, without any other evident cause, and even a degree of constipation supervened. The diarrhœa did not return for several months."—Notes, p. 93.

This affords a hint, which may, perhaps, be much improved.

To no hospital has the *university* traveller done so much justice as to *La Salpétrière*, at Paris. In truth the condition of those in mental derangement has attracted from him an unwonted degree of attention. "La France," says M. Esquirol, "donne au mondu civilisè l'example de plus de deux mille aliénés de tout âge, de tout sexe, de tout état, de tout caractre, dirigés, continuès, et traités sans coups et sans châine."*—Though this may not be minutely true, yet we participate in the feeling of proud benevolence, which may be conceived to have dictated this sentiment; and though our neighbours may have taken the lead, we trust that we shall not remain far behind in this race of justice and mercy. Indeed, whatever our mad-houses may have been, we believe they are now governed by the most mild and soothing laws. Confinement and the strait-waistcoat, we are told, are the only restraints now had recourse to at La Salpêtrière. The latter of these, for very good reasons, is very much abandoned in this country. It is never used at Bethlem, and very seldom at St. Luke's. Its inexpediency is very apparent. The patient is quite incapable of assisting himself in a thousand little necessary offices, and when locked up by himself, this becomes unusually irksome. When the wrists are manacled together, even the most furious are helpless: or a leathern girdle may be put round the waist, and the arms may be pinned down to this in a way to prevent any injury.

Dr. Esquirol finds that in France, in general, the number of deranged women is greater than that of men. In the southern provinces the proportion of males is greater than that of females,

* See our Review of this Work, Vol. I. p. 306.

while in the northern, the proportion of females is much greater than that of males.—*Notes*, p. 168.

La Salpêtrière, under Dr. Esquirol's management, affords as fair a specimen of the result of benevolent consideration and exertion as any institution to be found in France, or on the Continent. Here the classification of patients is attempted, and to a considerable degree carried into effect; though, without doubt, there is still much to be desired. The use of chains, and all that apparatus of severity which formerly obtained, are entirely done away, and the result has pretty clearly demonstrated that in an institution of this kind properly conducted, they are useless. "Firmness on the part of the directors has been found quite sufficient to keep the patients in order, and, as the attendants are selected with judgment, and their conduct is strictly watched, they perform their duty steadily and well, and the violence which is no longer permitted, is no longer necessary."—Carter, p. 17.

M. Esquirol, from 800 dissections which he has made, has come to the conclusion that "he has never found any constant alteration in the structure of the brain, or of any other part. The hardness of the brain, insisted upon by many, he had not generally remarked."—Carter, p. 25.

The treatment he pursues is no longer the decided and active one, in the way of bleeding, purging, &c. which used to be practised. He considers mental alienation as an acute disease, having its successive periods of intensity, decline and convalescence, the order of which is not to be disturbed by officious interference, though the symptoms are to be moderated by gentle means, viz. tepid-baths, diluents, occasional soothing medicines, and very slight dauches. Speaking to Dr. Clark of relapses, he said, that he had known many cases where a paroxysm had occurred after bleeding; in some cases after a small, in others after a large bleeding. The treatment is made as much moral as possible. An effort is made to gain the confidence of the patient, and this is generally obtained by appearing to take an interest in his affairs, and by scrupulously preserving good faith. As much work is given them as can be procured. The convalescents have a large room, where they are employed at their needle, and, by way of encouragement, they receive a trifling remuneration for their work. M. Pinel, as is well known, removed the regular servants from the institution, and set the convalescents, with much profit to themselves, and their unhappy companions, to attend upon the patients, and do the little menial offices.

The accounts with which we are furnished of the lunatic

hospitals of Antwerp and Amsterdam, afford much for commendation. It is to be regretted, however, that in the former there is no work for the men. "The women were employed in lace-making and spinning, and had I not been told that they were insane, I should not have suspected it, such was the tranquillity that prevailed."—Carter, p. 190. At Florence too, in the hospital of St. Bonifazio, the circumstances of the unfortunate inmates were comfortable.

Very different is their condition described to be, we regret to say, at Geneva. Dr. Carter describes some scenes as having occurred there, over which we willingly throw a veil. We trust, that before this time the arrangements are altered. Humanity, however, demands that we should be explicit with regard to the flagrant cases of Turin, and of Genoa; and though our feeble remonstrances may never reach the States of Sardinia, we cannot lose the opportunity of attempting to give publicity to a system, of all others the most barbarous, and which we must not forget is yet, alas, too frequent.

"The part of the hospital (Casa dé Pazzi) we were first taken to, consisted of small rooms similar to those generally met with in such institutions, but I was disappointed to find these were not for the poor patients, but for those who paid a certain sum for being kept. The first of these that was opened presented to us the wretched prisoner perfectly naked, and chained down to his bed by both wrists. He had raised himself in his bed as far as his chains admitted, by which movement he had thrown off the single coverlet that had been thrown over him. He had no shirt; his legs (apparently red and swollen from cold) were drawn up under the corner of the bed cover, which lay over a small part of his body; he was pale and emaciated; he uttered not a word. In short, a human being in so wretched a state I had never before seen; but I was soon to witness others in a state still more horrible.

"We were next conducted into a ward where thirty beds were huddled together, on most of which lay a poor wretch chained by one or more limbs to the bedstead; for to each corner of these was attached a massy iron chain, with a clasp of the same materials and strength at the extremity, for admitting the wrist and ankle; and, according as the keeper judged necessary, one or more of these were applied. Some were polished and bright as silver, from constant use. I imagined that these were the most unruly patients, but was told that this was by no means the case.

"To these we were next led; and on unbolting the door of a large cell, the scene that presented itself almost exceeds belief. The spectacle of the poor wretches, naked, or covered only by some straw, chained down hand and foot to their bedsteads,—the clanking of their chains,—the dreadful vociferation they set up at the sight of him who

had rivetted these chains,—the still more horror excited by such a spectacle, no terms are strong enough to depict! I had read and heard of chains and other means of torture for subduing (irritating) the unfortunate maniac; I had even seen such, singly chained to the wall by the neck, like an infuriated and dangerous beast; but a den like this, crowded and crammed with human beings, chained down, without a rag of covering, struggling to raise their heads, and exhibiting their emaciated and galled limbs from the heap of straw that had been thrown over them, was a scene I never expected to witness, and which I hope I may never witness again. In this cell there were twelve men, three of whom only were allowed any thing more than straw to cover them. Some I was told had been confined there for many months. On approaching them they exhibited their chained limbs with the most earnest entreaties for liberation. One man had two chains on one arm. In this case the space between the iron clasps was red, swollen, and ulcerated; and the mortification, which in all probability was to follow, would soon render chains unnecessary for him. Others had their limbs galled, but not in such a degree as that described. In one instance only, in the whole hospital, did I observe any thing introduced between the iron ring and the limb. The rest of the men's wards were similar to that I first noticed.

"From the men's we were led into the women's department, which was in the higher part of the house, and which, in every respect, we found similar to that we had just left,—the beds huddled closely together, chains—always ready—many applied, and most of the beds occupied; for whether to save trouble, or from the poor creatures having no clothes but the coverlet that was thrown over them, almost every one was in bed. Here, as below, was also a cell where straw afforded the only covering, where the chains were more heavily applied, and where the state of furious desperation to which the wretched victims were driven, was expressed in terms equally violent, and still more affecting. One of these tortured women held up her arm which was raw, and had been bleeding, from the iron clasp having worked its way into the flesh!

"Such is the dreadful state of this house, which contains 180 males and 97 females, of whom one third, the keeper told me, were kept *constantly* chained. From the same source I learned that the annual number of deaths (and this, I apprehend, is the principal way in which this house get rid of its inhabitants;) sometimes amounted to eighty (nearly one third of the whole); that it *had* been as few as thirty; and that the average was fifty (nearly one fifth),—a mortality, I believe, unequalled in any institution of the kind in any country."—Notes, p. 217-21.

Epilepsy.—"M. Esquirol has examined the bodies of about thirty epileptics, all of them adults, and who had most of them suffered under the disease for a long period. In these cases he met with little remarkable in the brain, but very constantly with disease of the spine. He seemed to speak favourably of the moxa in epilepsy, which he said les-

sened the frequency of the attacks, though he could not assert that it removed the disease altogether."—Carter, p. 26.

"M. Esquirol has no confidence in any remedy for epilepsy. He mentioned a case where a large portion of the stomach was destroyed by the use of the nitrate of silver in that disease. At the Bicêtre I found they were giving a pretty extensive trial in that disease to the application of the actual cautery to the head, and in most cases, I was told, with the apparent effect of prolonging the intermission, and rendering the paroxysm less severe."—Notes, p. 169.

It is very well known that, throughout the Continent of Europe generally, the theory of Brown obtained a footing it never acquired in this country. With regard to Lyons, for example, Dr. Clark tells us, from undoubted authority, that at this moment four-fifths of the practitioners are Brownists. In many parts of Italy this theory has even a more undivided sway. It is always pleasant, however, to witness the downfall of error. In France the doctrine of Broussais is penetrating every where, and commanding attention; and we are happy to learn from the "Notes," that the system of Brown, so warmly advocated in Italy, now begins to totter. The *Nouva Dottrina Medica Italiana*, which in practice at least is directly opposed to the system of Brown, now prevails more or less over the whole of the north of Italy. It is called the contra-stimulant plan: and the medical school of Bologna, which is in a very flourishing condition, may be considered "at the head of the new doctrine;" and the professors, among whom we find the name of Tommasini, its most zealous and able advocates. A periodical journal, too, has been established at this place, to give an account of the rise and progress of these opinions. We hope that in this way we may have an opportunity of frequently bringing it under the notice of our readers.

Pallagra.—The clear and interesting description of this frightful disease afforded by Dr. Holland,* being in the hands of every one, we cannot think of presenting all the statements given by Dr. Carter. As, however, his information was derived from an independent source, and still more as it contains some additional facts, we shall gratify our readers by stating them. The most striking symptom of the disease is an eruption affecting chiefly the back of the hands, feet, and ankles. The affected parts become extremely painful, especially in spring and autumn.

"After a time, usually, I believe, about the approach of winter, the skin peels off, and the patient feels better. In the following spring the

* Medico-Chirurg. Trans. Vol. viij. p. 317.

symptoms return in a more aggravated degree, and are accompanied by others, among which one of the most remarkable is a contraction of the muscles of the neck and back, by which the patient is drawn backwards, in a less degree, however, than in opisthotonos. Diarrhœa is almost a constant symptom. The abdomen is often affected with a swelling like tympanites, the extremities waste, and become dropsical, and at length the patient sinks into a state of stupor; he articulates with difficulty, and when spoken to, answers like one just awakened out of sleep. The disease generally terminates in mental imbecillity, which is not unfrequently preceded by mania.

"Dissection does not appear to have thrown much light upon this disease. In four subjects that were examined by a physician at Florence, the lungs were found loaded with serum, the blood contained in them was darker than usual; there were adhesions. The heart was pale and flaccid. The pericardium did not contain more fluid than natural. There were some marks of peritoneal inflammation. The intestines were paler than natural, and considerably distended with air; the glands of the mesentery were not diseased. The structure of the brain was not altered. In one of the four subjects the spinal marrow appeared to be harder than natural."

No treatment, yet adopted, seems to have been of any use in the cure of this disease. According to Dr. Carter, a nourishing diet has seemed for a time to check the progress of the disease.

"Latterly, mercurial friction has been employed by Dr. Cassini, of Florence, and he assured me that the patients recovered; but as this plan has been tried in two cases only, nothing decided can be said respecting it. Dr. Cassini is anxiously looking for an opportunity to give the mercurial friction a further trial. Perhaps the solution of the oxymuriate of mercury, given internally, might be useful."

Malaria.—In the "Notes" we have an account of the Malaria, as connected with Rome, which is not devoid of interest. The subject itself is truly interesting. We have been so obtuse as not very clearly to perceive a distinction that has lately been made, in one of our Royal Societies, between the cause generally supposed to operate, and that proposed as more correct. We are told that the theory, which ascribes it to the production of aqueous and vegetable putrefaction, is erroneous; and that the poison is the product of a highly advanced stage of the drying process in absorbent soils, that had previously and recently been saturated with water. Our dulness we trust arises from our not having an opportunity of hearing the ingenious author (Dr. Ferguson) speak for himself. In Rome, as in most other situations, it is not confined to low marshy grounds, but is sometimes found in high situations. In Jamaica, it will be remembered, we have the hill-fever. It seems to be generally allowed that the sources of the Malaria are gradually extending themselves in the neigh-

bourhood of Rome. Nay, some of the light forces of the enemy are to be discovered within the gates. "These additional sources of danger are to be found in the stagnant waters, saturated with vegetable substances, formed intentionally, or allowed to accumulate, in the gardens of Rome; and in the masses of vegetable matters left to putrify at every corner, even of the very streets." But as the author continues, "this is nothing new."

The Romans do not conceive that the mischief is augmenting, or that the number attacked is annually and progressively increasing. This latter point seems very clearly made out by the testimony of several of the Roman physicians, and particularly by that of Signor Scaramucci, secretary to the council for the administration of hospitals. In 1818, 8137 were admitted into the great hospital of Santo Spirito, and in 1819 only 6134. Of the former, 363 died; of the latter, 258. Most of the patients were peasants who had been labouring in Campagna.

If any additional evidence were wanting to shew how very restricted the poison is in its operation, both in horizontal and perpendicular distance, we are here afforded with some fair examples. Two young gentlemen in passing the Pontine Marshes, stopped during the night at a small inn. One slept on the floor of a barn, with the door open; the other slept in the carriage. The former was seized with the Malaria fever, which soon put on the tertian type; the latter escaped.—Notes, p. 83. The wall of the clinical wards of the hospital of Padua is washed by a branch of the sluggish Brenta. It has frequently happened, that the windows of the men's wards (about sixteen feet above the river) have been left open till too late an hour, and several patients have been attacked with the fever. The same incident has never occurred in the women's wards, immediately above the former, though there is no reason to believe that more care has been taken. If the observations of Dr. Regaud are correct, gauze frames fitted to these windows, while they admitted the air would arrest the progress of the miasmata; this precaution might be useful in all cases where windows are exposed directly to the air of marshes.—Ibid. p. 82.

Bark is the only remedy employed; and in quantities sufficient to astonish the English physician. The Prince of Peace, one year he resided at Rome, took 6lbs. and an English gentleman, during the season, took 13lbs.—the whole in substance. In 1818, the quantity consumed at the Santa Spirito, was 3,700lbs. There is a great prejudice against the muriates of potash and soda, and they are never used. Dr. Clark proposed its use to a patient who had long been ill, and it at once stopped the fever.

There is much good sense we think in the following remark:

"I cannot conclude this article (Amsterdam) without observing, that in Holland, which in many parts has the appearance of being absolutely uninhabitable, which is intersected by rivers, and canals, and ditches, in almost every direction, and where the rich meadows, which constitute the beauty of the country, tremble under the feet, the general robust and healthy look of the inhabitants, affords a striking contrast to the paleness, the emaciation, and the visceral disease, which are so common in the marshy districts of Italy and the islands of the Mediterranean. Perhaps it may be said that the temperature of the south of Europe may render the effluvia more active than in Holland; but even admitting such to be the fact, I think that a great deal of the misery and disease, which in Italy are ascribed to mal'aria, might be obviated by a different mode of living, by wholesome nourishment, good clothing, and better habitations. Were the Government of Italy, and the character of the inhabitants similar to those of Holland, mal'aria would probably be divested of half its terrors. It would no longer render the Campagna di Roma a desert, and make continual inroads on the city itself."—Carter, p. 235.

Dr. Clark, with great gravity, informs us that there is one class of affections for which the atmosphere of Rome appeared to him unfavourable, viz. headaches, from a tendency to fulness of blood, and of course apoplexy. He tells us, he finds that it has been also mentioned by a native author. We would ask by which it has not been mentioned. We had thought it was as generally known, that the temperature of Italy produced apoplexy, as that malaria produced fever.

Cretinism.—In the "Notes" we are presented with an Essay on Cretinism, in which we find little that is new, and which therefore need not occupy us long. The author agrees with Foderé and Saussure in considering the disease as deriving its origin from the moist, hot, and stagnating atmosphere of the vallies in the bosoms of high mountains. He considers the causes of goitre and cretinism as the same, though the two diseases are probably not connected as cause and effect. Cretins are never found but where goitres exist, though the latter are often found without cretins. This seems to shew that only a more powerful application of the common cause is necessary to produce cretinism. He agrees with several recent authors in thinking that it is becoming less frequent. "Dr. Wylie, of Petersburg, is said to use, with good effect, friction with an ointment composed of ℥ß of litharge ointment, ʒj of calomel, and gr. x of tartrite of antimony." We learn in the appendix, that M. Quadri still (Dec. 20th, 1819) thinks highly of the treatment by seton. "I find, says he, that all goitres of a soft consistence, and not arterial, were cured quickly and safely by the seton.

Of twelve individuals on whom the operation was performed, eight were perfectly cured. One patient, long detained in the hospital, died of typhus petechialis. Another, very unmanageable, with an indolent swelling of an inflammatory nature, tore out the seton; a fistula formed, accompanied by caries of the os hyoides, and destruction of the organs of speech, which terminated in death. These cases, of course, do not militate against the mode of treatment. In goitres of a hard firm consistence, the operation has been of little utility. "In the aneurymatic goitre I should be inclined to practise the method of Walther." Dr. Clark tells us it is most difficult of cure when it affects the *middle lobe*. This, unless we mistake, is the first time we have heard of this lobe.

One of the most interesting statements presented to us, is the notice we have of Professor Messofanti, of Bologna. He is one who deserves to be known, and acquaintance with him cannot fail to prove beneficial.

"While noticing the library of Bologna, I cannot avoid paying my tribute of respect to the talents and acquirements of its librarian, Professor Mezzofanti, one of the greatest linguists now living. Since the death of the late *Lady* Professor of the Greek, who died in 1816, he holds two chairs in this university: those of Greek and Oriental languages. He has already acquired a sufficient knowledge of thirty different languages, to enable him to converse in them, and is, besides, acquainted with several others. Among these may be numbered the whole of those of Europe, several of the East, and those of Peru, Brazil, and Mexico. The general knowledge of this extraordinary man, appears to be very extensive. Of the present state of the arts and sciences in England he is well informed; and in speaking to him of the state of medicine, before he had introduced me to the medical professors, I found him perfectly acquainted with the medical theories of Italy. He appears to be about forty years of age, and it is to be feared that his great assiduity in the discharge of his various duties, will soon injure a constitution not naturally very strong."—Notes, p. 194.

This undoubtedly is no common object of admiration! Will our brethren excuse us if we hold up another for general imitation. Both our authors, in the course of their travels, were struck with it, and we, most willingly, join our testimony to theirs. Much good fellowship and reciprocal communication, says Dr. Clark, exists among the medical men of Geneva. Dr. Carter says, the custom of the medical men meeting together at each other's houses is a very agreeable, as well as very useful one. The physicians meet every other Saturday; the register of the deaths that have occurred in the course of the preceding fortnight is read, and afterwards an hour or more is passed in

conversation on medical topics. On the intermediate Saturdays there is a meeting of both the physicians and surgeons. Professional men, strangers, find no difficulty in being introduced, for each member has the privilege of introducing those who have been introduced to him. No where probably will an English physician find himself more at his ease than at the Medical Society of Geneva. He will there meet with the most friendly reception, and will discover opinions and practice resembling intimately those to which he has been accustomed in his own country.—(Carter, p. 47.) In this spirit of good-will and fellowship we would take leave of our authors, and of the subject.

ART. III. *Ueber die Ausrottung Verschiedener Geschwülste, besonders jener der ohrspeicheldrüse und der Schilddrüse.*

On the Extirpation of various Tumours, particularly of the Parotid and Thyroid Glands, by Dr. Klein, of Stuttgardt.*

I. *Extirpation of the Parotid Gland:*—A woman of seventy, first perceived a small hard swelling anterior to the right ear when she was about the age of thirty, it gradually increased in size, but, till very lately, without being attended with pain. Latterly, however, it had become the seat of severe suffering, and it was this, and not the deformity, which induced the patient to apply to me for relief.

The size to which the parotid had attained was enormous. It extended from above the ear to the shoulder, the auricular cartilage was forced quite backward, and the rest of the features were entirely distorted. The tumour, which was irregular and knotty, measured nearly seven inches, from above downwards, five inches across, and projected six inches directly outwards

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* The German Klein is already known in this country by the notice which has been taken of him by Mr. Cooper, in the second volume of the new edition of his First Lines, lately published, article Lithotomy. The present paper will not lessen his reputation among us as an operator; it is taken from the first number of a new publication, which has lately (January 1820), appeared at Berlin, entitled, "Journal der Chirurgie und Augenheilkuude, von C. Gräfe und Ph. von Walther." Both men of eminence, and whose names are probably already familiar to many English surgeons. The work, though bearing the name of a journal, is much in the style of Cooper and Traver's Surgical Essays, and we hope to have frequent occasion to borrow from it.

from the cheek and neck. It rested on the shoulder, beyond which it projected considerably. The most prominent part of the mass was highly inflamed, and there seemed to be a fluctuation at this place; the veins were greatly dilated, and the whole swelling was the seat of severe lancinating pains. The patient had a small and very frequent pulse, hectic sweats, want of appetite, and she was greatly emaciated. But notwithstanding all these, and the advanced age of the patient, I proposed the extirpation of the tumour which threatened ending in a cancer, as the only chance the woman had. She immediately consented, and the operation was performed in May 1813. (In October 1818 the woman was still living.)

An incision was made so as to preserve a flap of skin an inch and a half broad along on each side of the swelling, that on the anterior part was first separated, and the tumour being then drawn outwards, it was detached from the subjacent parts from before backwards, for two thirds of its extent; the posterior flap of skin was then separated, and the tumour detached from its remaining adhesions from behind forwards. The operation lasted six minutes, and the difficulty and hazard attending it may be readily perceived. All the branches of the facial nerve were divided, a piece of the masseter muscle was left hanging, the external carotid artery and par vagum were left quite bare, the dissected sterno-mastoid lay on one side, and the temporal, external maxillary, and auricular arteries were of course divided, along with several arteries of the neck, yet the largest of these being tied the bleeding was very inconsiderable. The two flaps of skin met so accurately, that by means of adhesive straps they were kept within a line's distance of each other along the whole course of the wound. There was no secondary hæmorrhage or symptoms of consequence, and by the beginning of the third week the wound was entirely healed. The left side of the face, particularly the angle of the mouth, was for half a year drawn awry, but this gradually disappeared.

Besides this very large one, I have extirpated another indurated parotid, the size of a hen's egg, and likewise in a woman. The bleeding in this case also, was not great, and the extirpation was less dangerous, from the swelling not passing beyond the margin of the jaw. All the branches of the facial nerve were likewise cut, but without any bad consequences. For a short time there was a wry mouth, which by degrees entirely disappeared.

II. *On Steatomatous Tumours*:—The origin of these tumours is still involved in obscurity, I could rarely attribute them to the effect of pressure, as in soldiers from carrying the musket on

the shoulder, or those who carry heavy loads on the back, &c.; in general I could detect no cause whatever. They usually originate so gradually, and with so little inconvenience, that the patient does not observe them till they have attained a considerable size. Neither age nor sex seems to have much influence on them, and yet to me it has appeared that they are more frequently met with in females; menstruation however seemed in no way connected with them. From their indolent character, patients having them are long of applying for relief; and not until their size or weight proves an inconvenience. Hence, also, a variety of internal and external remedies have usually been tried, but without any advantage; possibly, at first, some external applications might be useful; but it very rarely happens that we are consulted at the favourable period. It is characteristic of these tumours, that frequently, without any evident cause, they suddenly begin to enlarge, and in a very short time attain an enormous size. Hence it is a fundamental rule to get rid of them as soon as possible, and for this there are but two methods: extirpation, the surest and quickest; or where this is not applicable, the introduction of the seton, which is not always to be depended upon.

Wherever it is possible, the first is to be chosen, however large the swelling, and however dangerous its situation, and it is only when its limits cannot be distinguished that the last is to be had recourse to. The seton is always uncertain, and I have seen several cases, where notwithstanding its application, the swelling either did not disappear, or it very soon re-appeared. This kind of tumour is never to be trifled with; independent of their often suddenly growing to an enormous size, they sometimes become, from bad treatment, carcinomatous, and prove fatal.

I have here communicated some of the most important cases of the disease which I have met with; and only remark that sometimes, not merely one, but several steatoma are present in the same individual. I have seen three instances of this, in two young women and one young man. In all three, there were on both arms (but no where else), from twelve to twenty soft tumours, varying in size from a pea to a pigeon's egg. To the largest a solution of gum-ammoniac in squill vinegar was applied, and the lesser were frequently rubbed with ox-gall and spiritus mindereri, whilst calomel and chalk were given internally. In the course of from eight to ten weeks the whole disappeared.

Schreger (in his Chir. Versuch. I. p. 301.) describes a very remarkable case of this kind of tumour, but I have had one which

seems to me to be still more so, and to be one of the greatest operations ever executed. Schreger's operation displayed unusual boldness, and, I think, mine no less so. The termination, it is true, was different, but by this, an operation is never to be judged; neither of us had any share therein.

Fr. v. H. a delicately formed female of forty-four years of age, mother of several children, and in other respects healthy, perceived about five years ago, in the middle of the posterior surface of the right thigh a soft tumour, of the size of a hen's egg. Of this she could give no cause, and the existence of it she first noticed as she one day happened to sit down in an awkward manner. Feeling no pain, she paid no attention to it, and it was only at the end of a year, when the swelling had greatly increased in size, that she had a surgeon to examine it, who treated the matter lightly, told her to be perfectly easy, that it was a thing of no consequence. Being in other respects well, and confiding in the opinion which had been given her, she made no further inquiries, to which her great bashfulness considerably contributed. Although, therefore, the tumour continued to enlarge she paid no regard to it, was in the habit of seating herself on the edge of the chair, and was so accustomed to its rapid growth as almost to forget she had it. In the mean time she became pregnant, and after her confinement her menses continued regular as usual. In the course of five years, however, the swelling had so much increased, that its size and weight became extremely troublesome to the patient, and she was at length compelled, by the constantly increasing pain, to seek relief, and for the first time shewed it to me. I had seen and read of somewhat similar swellings, but such a one as this I had never seen.

I found the woman suffering from slow hectic fever, extremely emaciated and pale, having a tumour on the posterior surface of the right thigh, extending *from the buttock to the ham.* It was irregular and knotty, and measured *three feet one inch in length, and two feet six inches in circumference.* It was very moveable, and appeared to be seated above the fascia lata, ; its limits were well marked, and there was considerable pain in it; these therefore, determined me, notwithstanding the hectic fever and the extraordinary size of the tumour, to propose extirpation as the sole remedy, to which the patient immediately consented, and only waited till the period of her menstruation was passed, to have it performed. I allow that I took this swelling for a very large encysted tumour, notwithstanding its irregular surface, and its being not very tense.

In May, 1814, the operation was performed. Having placed a tourniquet as well as possible on the femoral artery, and laid the woman on her belly, I made an oval shaped incision, such as I had never before done. The length of it was more than *three feet*, and the *breadth* of the oval piece of skin removed, was *above a foot and a half*. But my astonishment, and I may at once own terror, may be conceived, when I now found that this was no encysted tumour laying above the fascia lata, but a steatoma coming from beneath it. The more I separated the deeper I got, and at length, I not only came to the thigh bone (from the convenience of the position, I operated first on the external sideof the thigh), but I was obliged to detach the tumour anteriorly from around it, all the way from above downwards. The difficulty of this operation it is utterly impossible to describe; I would never undertake such another—but being once begun, it must be finished. To express myself briefly, the steatomatous tumour was spread in every direction in length and breadth amongst the muscles, nerves, and blood-vessels of the thigh. (And this being the case, it appears to me remarkable, that neither was the under part of the limb œdematous, nor were any of its motions impeded, which I ought to have previously mentioned, and which tended to confirm me in the propriety of the operation.) I was obliged, as in a subject, to prepare and dissect the vastus externus and internus, the biceps, semi-membranosus and semi-tendonosus, all of which, like a number of bands, were either spread on the surface of the tumour, or were interwoven with it; so that, loosened from all adhesions on their upper and under surfaces, they hung quite loose. In the same way, partly with the fingers and partly with handle of the knife, I detached this tumour from the femoral nerves, arteries, and veins, which passed through it; all these were so separated and loose from the cellular membrane, from above downwards to the ham, that I could readily pass my hand up and down among them, the pulsation of which artery, however, did not afford me the greatest pleasure.

Several vessels were obliged to be tied, the chief of which was the profunda femoris, from its being so intermixed with the tumour. The blood lost did not exceed a pound, partly because the tourniquet acted well, and partly because immediate pressure was made by the assistants. The tumour when extirpated weighed fully *twenty-seven pounds and three quarters*. —The operation lasted sixteen minutes, and during it the patient kept so perfectly quiet that the assistants had no occasion to hold her. I know not whether to claim more, for her courage or my own. The wound, in reality frightful, was brought together by means of adhesive straps and bandages, so that its

edges approached within a quarter of an inch of each other. Of course there was a roller brought upwards from the toe, long compresses put on each side of the wound, &c., all the irritated parts being previously besmeared with warm oil.

After this extraordinary operation the patient was quite as calm, as she had been previously, without pain, and the pulse scarcely quickened. She got a draught with laudanum, there being some vomiting. She made no complaints of the foot, and it was as warm as the other. The pulse in the evening was 116. The night she passed well, and likewise the next day, when she had a spontaneous motion in her bowels, the pulse as previously, no pain in the foot; she merely complained of a slight burning sensation, and there was an oozing of a watery fluid. Warmth moderate.

On the third day there was an increase of fever, and pain in the thigh, but she was quite cheerful, and had several stools. The bandage was a little loosened, and several straps of plaster were cut, to her great relief. On the fifth day the wound was dressed; nearly all the lint came off, the edges of the wound were pretty close to each other, and looked very clean. Suppuration had commenced; the pulse was unchanged, and the patient was in good spirits; the foot was as warm as the other.

It went on in this way till the eighth day, on which day I saw her; we were in great good humour; the wound was suppurating beautifully, and every thing promised the most successful issue. The next day I received the unexpected news that she was constantly complaining of an uneasiness in the foot of the affected limb, and that its position must continually be changed. Her cheerfulness now left her, the pulse became weak and intermitting, the extremities cold, and she thus sunk in the most unexpected way.

What caused the rapid death of this woman I know not; for eight days she was cheerful, and the day previous, even humourous, the pulse never rose above 116. Appetite, sleep, bowels, warmth, &c. as could be wished; contrary to all expectation, pain was never spoke of, the suppuration was proceeding beautifully, the wound had the best appearance, all the separated parts had, in the best possible way, come in contact, the foot was not swelled and was uniformly warm, the pulse at the ham, as at the hand; in short, no better state could have been wished for, and yet on the ninth day she unexpectedly expired.

I once amputated a man's thigh, on account of a carious knee, he lost very little blood, the dressings were quickly applied; he was extremely glad at having got rid of his pains, and the whole afternoon was very cheerful, and yet he died during the night, as

the above woman, without any evident cause, without losing a drop of blood, his strength rapidly sinking, and he gradually getting colder. There are several other cases I know of, where, after operations, the patient has expired exactly as in the above cases, without any perceptible cause. Thus one individual died after the operation for lithotomy, and when I had not the least reason to expect it. Froriep met with the same thing. Notwithstanding its unlooked for unfortunate termination, the above case is still very important. The tumour, as extirpated, with all its accompanying projections among the muscles, nerves and vessels, is preserved in the pathological cabinet of the university of Tübingen.

A very delicate girl, aged eighteen, had a swelling form, without any attributable cause, in the middle of the left thigh, anteriorly, exactly where the femoral artery passes under the sartorius muscle. At first it was not attended to, but when it could no longer be concealed by her clothes, I was called in. The tumour was round, prominent, circumscribed and firm, but scarcely moveable; and exactly like an encysted tumour, the size of a large walnut. I extirpated it in the usual way, giving the necessary caution to the vicinity of the femoral artery. The hæmorrhage was unusually copious, but at length yielded to pressure. The tumour was solid, but had no cyst, and characterised itself as a firm steatoma, or rather, as it afterwards appeared, as a fungus hœmatodes. The wound healed readily, but some months afterwards a similar swelling appeared an inch lower than the first. This was also extirpated, and the wound healed as before. In the course of a few weeks a third appeared, at the side of the situation of the former, and after its extirpation a fourth, a fifth, and finally, a sixth. Each time the new steatoma was at some distance from the former cicatrices, and never seemed to be at all connected with the preceding ones. It could not therefore be supposed that some part of the former tumours had been left behind. On the extirpation of the third one, I removed more than two finger breadths of the sound parts all round, to prevent all recurrence of the disease. The first time I healed the wound by the first intention, afterwards I allowed it to suppurate. The fascia lata lay beautifully bare, and no where could any thing morbid be discovered by the most careful examination. After the sixth extirpation the whole wound was repeatedly cauterized with a red hot iron, in order to prevent the recurrence of the disease, and it was kept open for three months. The general health was never affected, and menstruation continued quite regular. Scarcely a few weeks,

however, had elapsed, after the wound was closed, when a fresh growth appeared, several inches above the cicatrix. The unfortunate girl dreaded the repeated operations, and for a long time concealed the new tumour, and when from its rapid growth it could no longer be concealed, she shewed it to her father, who, without asking any one's opinion, applied some unknown plaster to it. Upon this the tumour increased, with gigantic steps. Another swelling appeared on the crista of the ilium, which grew as rapidly. The tumours soon became painful, burst, became cancerous, and spread in the most frightful manner; hectic fever, nocturnal sweats, great emaciation, and along with others, tetanic symptoms. Relief was now impossible, and the poor girl died after long sufferings; the whole history including nearly three years.

III. *Extirpation of the Thyroid Gland:*—Hartmann, from Kloster Reichenbach, near Freudenstadt, eleven years old, deaf and dumb, and uncommonly little of his age, in other respects healthy, born of a very delicate father and an epileptic mother, having four scrophulous sisters, was observed to have at his birth a circumscribed swelling, the size of a hazel-nut, on the left side of his neck, which slowly increased. The very indigent parents were little able to procure assistance, although they manifestly perceived the swelling daily increasing for the last five years. At length, in July 1815, the boy was brought to me, and I, as well as all who saw it, were surprised at the remarkable size of the tumour. It began at the margin of the left side of the lower jaw, and from behind the ear and over the larynx, occupied the whole left side, extending as far down as the third rib. Vessels, the size of the finger, ramified on the swelling; it was with difficulty moveable, but more from its weight than adhesion at its base. Superiorly it was *six inches* across, inferiorly *five*, diagonally it measured *sixteen inches*, perpendicularly *eleven and a half*. Its surface was very irregular, and the pulsation of the arteries passing into it was very manifest in several places. As there was no other remedy in this case I resolved on extirpation, notwithstanding the great difficulty, and the evident danger attending it. I had here to do with a child which it was impossible to make understand any thing, and who had already behaved very ill on the mere measuring of the swelling. The solidity of the tumour forbade the introduction of a seton, and the size of its base was as much against the application of a ligature. That the boy was deaf and dumb was no contra-indication, and therefore I proceeded, in the following way:—

The boy was laid upon a table, because I did not choose to venture his being held in the lap of an assistant, whose respiration would have kept him moving, and rendered the operation less secure. One assistant held the head, two on each side the shoulders, and two the hands and feet. I stood on the right side and made a rapid oval incision, so as to leave on each a flap of skin three fingers in breadth. The numerous dilated veins divided by this incision gave out, as might be expected, a considerable quantity of blood momentarily, but there was a sufficiency of fingers present to check this bleeding: yet in the short time half a pound of blood was lost. The left flap was quickly separated; an assistant compressed the carotid firmly with a cork above the clavicle; I drew the swelling firmly outwards, and keeping close to its base, detached it sometimes with the fingers, sometimes with the knife, sometimes with its handle, from the carotid, larynx, and whole of the trachea, and then separated the right flap from below upwards. All this lasted, and who would suppose it, a minute and a half. I would never have believed it, for the time particularly when detaching from over the strongly pulsating carotid appeared very long; but several of those present who measured the time by their watches, coincided therein. To our astonishment no blood flowed, even the necessarily divided thyroideal arteries did not bleed, and excepting the hæmorrhage from the divided cutaneous veins, very little blood was lost during the operation. We were still more surprised at seeing the child be without any signs of life. I immediately dipped a sponge in cold water and applied it to the wound, and threw some on the face likewise, on which deep spasmodic breathing took place. I considered it a deep syncope, the boy had only uttered a cry on the first incision, at least nobody observed any thing further, which might be explained by the attention of all being directed to the operation. Friction, stimulants, and all other means for restoring animation were now applied, and continued for three quarters of an hour, during which time, it is true, the heart, and here and there the arteries, were felt feebly pulsating, but the inspirations became gradually less and less frequent, and without the slightest convulsive motion the life of the patient became extinct. The necessary precautions were taken from the possibility of reanimation, but notwithstanding, it did not take place.

Now arose the question, what was the cause of death? Loss of blood it could not be, and as little a wound of the carotid; as little could it be an injury of the par vagum, for in the first place this is not fatal, and in the second place it occasions quite different symptoms; the passage of blood into the larynx, either

by the mouth, or by a wound of itself or the trachea, it could not be likewise, for then there would have been violent coughing, and the passage of air. Considering then the short duration of the operation the kind of death was still inconceivable.

The following morning I examined the body. The edges of the wound could have been brought capitally together as far as the top of it. The par vagum and jugular vein were, during the whole extent still covered with a little cellular membrane. The laterally pushed sterno-mastoid was cleanly dissected, but without being cut. An incision was made in the carotid where it arises from the aorta, and water was thrown into it repeatedly, but without even a drop flowing from that vessel itself; it came, it is true, from the dilated thyroideal arteries, which however were divided at such a length as to render it a matter of no difficulty to tie them. The par vagum was dissected in its whole course, and found to be not in the least injured, which indeed was impossible while the carotid remained uncut. Along with the carotid four cervical vertebræ were merely covered with cellular membrane, so deep did the tumour extend; the œsophagus was laid bare to as great an extent as the larynx and trachea, which were likewise pushed to a side. I divided the latter from below upwards to the glottis, and not a drop of blood was there. How difficult this extirpation was, may be readily perceived, and the beauty and rapidity of the operation likewise recognised.

The lungs were of a pale red colour, and not filled with blood; the pericardium was greatly extended with serum, so that it might be termed hydrops pericardii. The heart itself was flabby, and all its cavities empty. All the intestines were in a natural state. On opening the head, all the vessels of the dura mater and brain were found turged with blood; beneath the tunica arachnoidea of the right hemisphere there was so much serum that it was distended like a bladder, beneath that of the left there was some likewise, but in much smaller quantity. The right ventricle was much enlarged, and contained at least eight spoonfuls of water; the foramen monroianum was much dilated; the left ventricle was less than usual, and little fluid in it. In the choroid plexus there were no vesicules, but they were greatly distended with blood. In the brain itself, from its being very pappy, nothing further could be observed, but that the convolutions evidently went not so deep as usual, particularly on the right side, and that the substance of the brain was posteriorly very thin. The longitudinal sinus was empty, but all the others were gorged with blood. The cerebellum was of its natural appearance, and no serum

flowed from the cavity of the vertebral canal. Nothing unusual could be remarked in the auditory nerves; but there was this deviation from the natural form in the pars petrosa of the temporal bones, that the semicircular canals were unusually prominent.

From this dissection it would seem as if this boy had died from apoplexy caused by terror, favoured by the existence of the hydrocephalic state. Now that I could account for the boy constantly keeping his head bent backwards, whilst from the weight of the tumour he ought to have kept it bent forwards; it explained why he was so silly; with money it is true he appeared to be momentarily pleased, but shewed this by a peculiar, one might almost say by an apeish grin; why his pupils were so constantly dilated, and wherefore the developement of his body so little coincided with his age. He could indeed walk, but was always obliged to be led, tottered thereby, and must immediately be taken in the arms again. His height did not exceed that of an ordinary child of five years of age. He was exceedingly timorous, and hence it may have happened, that on seeing so many people, being suddenly laid upon the table, and as quickly held on all sides, and moreover feeling the large incision, that he was so terrified, that a real apoplexia sanguinea was thereby produced, which, notwithstanding the large bleeding, quickly killed him.

There have been too many instances of people dying suddenly from joy, anxiety or terror, for me to quote examples. In all cases the scientific practitioner judges of a faultless operation, not by its consequences, but according to the manner in which it was devised and executed; and in the present case I cannot reproach myself with any thing, on the contrary, I have rather reason to be pleased with it.

The tumour was a completely disorganised thyroid gland (or rather its left lobe,) which was shewn by the two dilated thyroideal arteries running into it, and the want of this gland in the body after death; on the right side there was only a very small remains of the gland. The tumour weighed only three pounds, but its base, which was the principal thing, was in every diameter above six inches. It was firm like a steatoma, internally it had a reddish appearance, and was divided into several lumps.

This was the first time that I extirpated a thyroid of this size, I had never seen it done, and had not performed it on the dead subject, never having had an opportunity, or perhaps I had omitted to take advantage of it. It would be presumption in me, from one case only, to condemn others, but I freely own

that I cannot understand why the hæmorrhage is so greatly dreaded; and I as freely avow, that before this operation I was not at all afraid of it, and that I proceeded to undertake it with the perfect confidence, that occur what might I knew how to obviate it. In no instance, is there much hazard. I can only conceive two kinds of case, either the greatly enlarged thyroid (we may call it at once Goitre,) is at least somewhat moveable, or it surrounds the carotid, trachea, or what else you please. In every instance where extirpation is deemed requisite, the tumour is drawn as much outwards as possible from the subjacent parts, and in the first case it is dissected out with proper care; and in the other, which is soon detected, the base of it is tied with a ligature, and the tumour amputated. The case of Mr. F., as afterwards related, is an example of this last.

In every instance the thyroideal arteries must be divided, in the first the trunk, in the latter the branches; and in this last case, gum arabic conjoined with continued pressure towards the vertebræ, and tightening of the ligature, will unfailingly suffice. With regard to the first case, where the trunks of the arteries, and all the other muscular and cutaneous vessels are to be tied, I own that I would not follow Desault or Richter, &c. who advise that every vessel is to be tied as it is cut, and before the operation is finished. The latter, in his lectures, recommended this to be done in all operations, even at the extirpation of a mamma; at first I did as he recommended, but I soon wrote to my worthy master, that for various reasons I would no longer follow his advice in this respect, and since that, I do not, and find I do much better.

In this, as in every extirpation, due rapidity is every thing;—who would stop to tie muscular vessels? If they bleed freely, there is the assistants to compress them, if they do not, we pay no attention to them. In our present case we have the considerably enlarged thyroideal arteries to do with; the inferior is always less considerable, and by the time we get to the inferior the operation is nearly done. But what can both these arteries do? why are we so afraid of these vessels, when we daringly amputate at the shoulder-joint, and even speak of that at the hip? The latter I pass over for good and very evident reasons; but with respect to the first, it is said we have only to compress the subclavian artery, in order to finish the operation quietly. Well—I have done this myself, and have had some disagreeable occurrences to deal with (as I have described in my Results of amputation in the Russian hospitals), and believe the division of the axiliary artery is of somewhat greater importance than that of the thyroideal arteries. We have only to compress the

carotid on the vertebræ (with a cork) above the clavicle, and all danger is removed. But to this it may be objected, that the inferior artery is not taken care of;—true, but how many vessels are divided in every amputation and quickly tied? And then, if an experienced assistant compresses the carotid with some of his fingers, the subclavian also must be compressed, before it gives off the inferior thyroideal. But supposing that the form of the tumour will not permit of this precaution, then a case of amputation at the shoulder-joint occurs to me, where my assistant could no longer compress the subclavian, and yet by rapidly finishing the operation, and as quickly tying the vessel, I succeeded perfectly; so that in this case I would also hasten the extirpation, notwithstanding the hæmorrhage, and the assistant could certainly now compress the carotid, and the vessels might be tied.

The extirpation of a goitre I consider (unusual cases excepted) as equivalent to amputation at the shoulder-joint, and the latter ought in some cases to be the most difficult. It may be said that the œsophagus and trachea may be wounded, it is possible, but yet not very probable: and if these tubes have united when cut nearly quite across, why should not a longitudinal cut in them, heal also? But the carotid itself may be wounded, either from indexterity, or from the vessel passing through the tumour rendering its division unavoidable. This is quite true, but has the carotid never been tied?

However unimportant it be, whether an operation lasts half a minute or half an hour, when the longer or shorter duration of it, is not dependent on the indexterity of the operator, in the last case, or his rudeness in the first, still this must have been of importance in the case we have been relating. As to hæmorrhage there can be no thought of it, considering how short time the operation lasted. It is true it may be said, that the great vessels were found empty, that from the so greatly dilated veins blood so quickly lost even although it only amounted to half a pound (allow that it was a whole one), would cause much more harm than if double the quantity had been lost slowly. But there was evidently too much blood in the brain, and it ought to be remembered, that between the time of the boy's death and the dissection of the body, a considerable quantity of blood flowed from it; and it is to this, rather than to that lost during the operation, that the emptiness of the vessels is attributable. With these cases the following may be classed:—

A very irritable young man had a tumour form without any evident cause below the larynx, the increase of which more and

more impeded his speech and breathing, so that frequently for a fortnight at a time he could not give those instructions which his situation of tutor required, and he was therefore obliged to seek relief. On examination I found a round circumscribed firm tumour on the anterior part of the neck, extending nearly to the top of the sternum. I conceived it to be an encysted tumour, and advised extirpation, which it is true I did not reckon quite easy, but the execution of which appeared very possible, from my being able to move about the tumour, although this was not very readily done.

Having made an incision over the middle of the swelling, I first separated the skin from the left side of it, as being the most convenient for me, and then drawing the tumour outwards by a hook, I wished to detach it from the trachea, but was not a little surprised to find not only the carotid beating on my fingers, but that the tumour passed round the trachea. Having separated it so far as to perceive that I could not get it from behind the trachea, I altered my plan, particularly as during this dissection my patient became suddenly hoarse. My object now was to separate on its right side the tumour as deep as possible from the trachea, and then to put a ligature around it. I again dissected here as deep as the carotid, and all obstacles were now obviated, when suddenly the patient became quite dumb. I quickly tiedthe tumour, and amputated it as deep as possible near the ligature. The hæmorrhage was not particularly great; three arteries were tied, and dry lint applied, because by suppuration the rest of the tumour was expected to be distroyed.

The patient remained speechless nearly three weeks, so that he could only make himself understood by writing, and it was not until the fourth week that he could speak, and then with exertion. Deglutition was attended with great difficulty, so that each time he attempted to swallow, he was obliged to bend himself quite forwards, and trembled hands and feet. On the eighth day the ligature and piece included in it came away, and the remaining portion was gradually destroyed by the application of butter of antimony, so that in six weeks he was quite cured.

At present he can swallow quite well, but his voice is transformed into a very deep well-toned bass, so that he sings delightfully in a concert. He is obliged to guard against moist weather when his voice becomes instantaneously hoarse. In other respects he is at present (1818) perfectly well.

Baron v. T., aged twenty-two, had felt, since the age of fourteen, a moveable circumscribed hardness at the under part of the right side of the neck, which, as it did not trouble him, was left

to itself. He early became an officer, and as such was exposed during the campaigns to all kinds of hardships. From the frequent heats and chills, he perceived the hardness not only to increase, but he also felt difficulty in swallowing, an unpleasant weight in the head, which put him in so low spirits that at the conclusion of the war he took his discharge.

His medical attendants treated this enlarged gland, which they supposed it to be, in every possible way, but fruitlessly. It increased in size, and consequently in the bad effects of its pressure, and having consulted great numbers, he received the poor consolation that nothing could be done for him, but by a very dangerous operation. This increased the depression of his spirits, which arrived at the greatest height, when by a melancholy accident, he most unfortunately shot his brother's only child in its cradle. He now became tired of life, and determined to have the operation performed, applied to me, and persisted in his determination, notwithstanding all my objections.

I found above the sternal end of the right clavicle, below the sterno mastoid, an induration, the extent of which corresponded in size to that of a small dollar. It sometimes disappeared entirely, and it was only by turning the head laterally, making several attempts to swallow, accompanied with considerable pressure on the neck near the clavicle, that it could be again brought up. If a finger was now placed quickly below it, it might be brought upwards as high as the middle of the trachea, and in doing this it was perceived that it extended very deep; and when it was pressed downwards, the patient had so extremely a disagreeable sensation in the head as could not be borne, and the pressure must be immediately ceased. That an operation was the sole remedy; that the consequences of this induration, by the increasing compression it occasioned, would constantly become more critical, were to be granted; but the patient having made his will, resolved upon the operation, and notwithstanding all the danger, I had also to resolve upon it.

On the fourth of April I executed it, and its description is as difficult as its execution was. My plan was to cut down directly on the elevated tumour, but this could not be done, the patient being quite unable to support the requisite pressure, for however short a time. I therefore made an incision four inches long through the skin, running parellel to the inner edge of the sterno mastoid muscle as low down as its tendinous part, and separated the muscle for above half its breadth from the subjacent ones. But the tumour was now nowhere to be felt, it had sunk deep behind the clavicle, so that I could scarcely touch its upper edge. It is really difficult to conceive how many vain

attempts were made to seize hold of the tumour, but by various turnings of the head, repeated attempts to swallow, &c. I at length succeeded to lay hold of it with a double hook at the moment it rose, and to draw it upwards.

I now quickly passed a needle through it, and holding firmly held by means of the ligature thereto attached, I separated the muscles proceeding from the breast to the os hyoides thyroid cartilage, which were spread tense over it, as well as the sterno mastoid; but the muscles going from the scapula to the os hyoides through which I had stuck the needle, and through which the ligature also was passed, I cut directly across. This was important for me, because the tedious dissection of the other muscles both took time and occasioned considerable pain. The more I drew out the tumour, which was effected partly by the ligature, partly by hooks, and partly with the finger, the more slowly and cautiously I separated it. The deeper I got, the more was this effected by means of a blunt edged instrument with the fingers. At every pull, and at every section, the patient felt at one time the most indiscribable stounding pains through the head, at another spasms of the diaphram, at others involuntary inclinations to swallow and vomit, so that I was obliged quickly to change the direction of the tumour or of the incision, by which the extirpation was rendered more and more difficult, particularly as the tumour was now discovered to be much larger than had been previously supposed. During this time, the superior thyroideal artery was divided and bled pretty freely, but as I intended finishing the operation presently I paid no regard to it. Having detached about two-thirds of the tumour in the way described, the effects of the tension of the nervus vagus, and phrenicus became more and more severe, so that I was obliged from this, the previous duration of the operation, and the hemorrrhage, to put a ligature round the tumour and amputate it beyond it. On tightening the noose however, and drawing it to me, I forced the tumour out of its situation; the noose passed quite behind it, and on tying it, the round tumour lay fairly before me, with the ligature very firm to its root. Thinking I had now got the advantage, I altered my plan, cut the tumour fairly off, and with this, divided the unusually dilated inferiort hyroideal artery, the ligature following the tumour. The hæmorrhage which now took place may be conceived, to tie the vessel was impossible, the cavity out of which the blood flowed was two inches deep behind the clavicle, for so deep could I reach with my fingers, compression could not be applied, the operation had lasted a quarter of an hour, the patient began to feel sick, the spunges applied to the wound were in an instant filled with

blood, and forced out; it was high time to act decidedly. Nothing else remained but to force a sponge, the size of the fist, into the cavity of the wound, and to have it compressed by six successive assistants; this succeeded; every one thought I had cut the carotid, the bleeding was so copious.

In the bandaging and subsequent treatment there was nothing peculiar. There was considerable fever the second day, a constant inclination to cough took place, along with a very disagreeable sensation in the region of the diaphragm, conjoined with a great shortness of breath, so that the patient was obliged to keep constantly in a sitting posture. This was evidently the effect of the irritation of the sponge on the phrenic nerve. Extractum conii, Dover's powders, nitre, and aperients were indicated; but the cause, the sponge, durst not be removed. By the remedies used, and partly, perhaps, by the commencing suppuration, the irritation was lessened; and by the former means, conjoined with sinapisms, a violent pain of the head diminished. It is odd that neither the power of swallowing nor of speech were in the least injured.

Suppuration became daily more copious, but the spunge itself remained immoveable. Attempts to withdraw it were not made, and I was at the distance of twenty miles from the patient. On the ninth day, the spunge was evidently elevated above the surface of the wound, and by cutting off the prominent part, gently moving and turning it, &c., I at length succeeded in drawing out the spunge, prodigiously swelled as it was, and in doing this a trifling hæmorrhage took place from the edges of the wound. The sponge was positively one-third larger than when I put it in, but to assign this more accurately was impossible from a dog having laid hold of, and swallowed it as soon as it was laid down. (Though not belonging to our present subject, it may be mentioned as not uninteresting, that this pretty large sponge caused no inconvenience to the dog, although we do not know if he vomited it up again.) The cavity now seen, and which was necessarily filled with the pus forced from the sponge, after being cleaned, of course shewed considerable extent and depth; but the patient was now in the strictest sense freed from all his miseries.

Several pledgets besmeared with white of egg and oil were now introduced, and their size and number diminished daily. The symptoms entirely disappeared, the wound was healed by the third week, and the patient is now one of the gayest of men. The cicatrix is very inconsiderable; the motions of the head are in no way impeded, and he can speak, swallow, cough, hunt, ride, and make long journies on foot, &c.

ART. IV. *Observation sur une plaie du bas-ventre, avec lésion d'un intestin grêle : précédée de quelques réflexions sur les plaies des intestins en genéral. Par M. le Baron Larrey, Chirurgien en Chef de l'Hôpital de la Garde Royale.**

IT is by no means without reason that wounds, entering into the abdomen, and affecting the intestines at the same time, have been considered by medical authors to be of the most dangerous cast, if not mortal; nevertheless, we have had opportunities of remarking in many articles on our work on Military Campaigns, that lesions of this sort, resulting from musket shots, are susceptible of cure; and in pointing out the resources of nature in these serious cases, we have also pointed out the means to be put in practice, as well as the proceedings to be followed up, in conducting such wounds to a happy termination.

Suppose, for example, that the projectile passes into the cavity of the abdomen of an adult, in such a position, that some point of the ileum, or of the large intestines, has been destroyed along some portion of its tube; there is then an attrition or bruising of the parts struck by the projectile, whilst this last causes great restlessness, with numbness of the neighbouring parts, and also on others at certain distances, the result of which is a sensible contraction of the first, and a degree of swelling, more or less considerable, in the surrounding cellular texture. The discharged matters make their exit outwardly by the wound, or accumulate in the focus we have spoken of, without communicating with the cavity of the abdomen; a most admirable precaution on the part of nature, and which also demonstrates to the surgeon the conduct he ought to pursue in any similar occurrence. Following up these salutary views, we are cautioned to be particularly careful in such case to search for the wounded part of the intestine, in order to bring it to the edge of the opening in the belly, and confine it there, by means of a loop (anse) of thread, passed through the mesentery, and to unite the wound by means of a suture; that in either case a series of mischievous accidents are to be dreaded, such as internal hæmorrhage arising from the ruptured adhesions, or a new division of the blood vessels (for this last operation cannot take place, even if it were threatened, except when cleansing the borders of the wound); and especially any pouring of the discharges into the cavity of the abdomen itself. It is necessary to be careful of the adhesions, and to content ourselves (after having always dilated

* Revue Medicale.

the edges of the exterior wound as far as the aponeuroses, inclusively) with the application, on this wound, of a cloth perforated with holes, spread with a balsamic ointment, and appropriate external applications.

We have had occasion to attend after many battles to a great number of soldiers wounded in this way, the cure of all of which have generally been conducted in the following manner:—Up to the period of the separation of the eschars, or sloughs, the alvine evacuations pass in small quantities by the wound; but afterwards, finding no obstacle, they issue freely, and continue till the entire cleansing of the wound; at that period, it becomes proper to favour the approach of the edges of the two wounds, both those of the external parietes of the abdomen, and those of the wound in the intestine, by aid of slips of sticking plaster (Bandelettes agglutinatives), and a slightly compressive concentric bandage—the two wounds approach each other gradually and at the same time—the parts homogenous to each other naturally adapt themselves, contract a mutual adhesion, and form the cicatrix, which first displays itself on the wound of the intestine, and so gradually extends itself from within to the exterior—the intestine itself also experiences a degree of contraction correlative to the original loss of substance.

The greater part of the early adhesions disappear or become effaced in succession, and those parts which had experienced any transposition recover their natural and respective position, with the exercise of their functions; phænomena which we have already taken notice of in wounds of the belly attended with protrusion of the epiploon.

Those wounds of the intestines, which are effected by a polished weapon, do not hold the same course, nor do they present the same phænomena. We are of opinion too, that their prognostic is more dangerous, especially if the phænomena arise to a certain extent—they also require the promptest assistance.

Two main proceedings are pointed out in their cure: the one consists in retaining the wounded portion of the intestine, at the lower part of the wound of the belly, by means of a loop (anse) passed into the mesentery, in order to prevent any effusion of the alvine matters into the abdominal cavity; and to give time for nature to isolate the wounded intestine, (in like manner as happens in wounds from fire arms) till the causes of irritation are entirely subsided; till the lesed parts gradually recover their original position, and the lips of the intestinal wound mutually approach so as to become cicatrized, for this is the true cure effected or attempted by nature: and this, without doubt, is the most advantageous and the most ready mode of proceeding.

The second indication consists in immediately re-uniting or bringing the lips of both wounds into contact, by means of a simple suture; or forming a kind of invagination, aided and supported by loops (anses) of thread, passed into the substance of the two ends of the wound of the intestine, and sometimes by interior ones. This last method has been much extolled by John Bell, not only for wounds of the intestines attended with loss of substance, such for example as are caused by musket shots, or gangrene, but also in simple wounds.

Without entering into any circumstantial details respecting the advantages or disadvantages of these different methods, we will in a few words point out that which we believe to be the most advantageous in wounds from polished weapons, for we have already made known our opinion respecting those arising from fire arms.

Undoubtedly, the proceeding recommended by Litre in wounds of the intestines, whatever be their nature, is the least likely to occasion any irritation in the læsed parts; but it is also attended with the inconvenience of prolonging the disease, and keeping up an unnatural anus during a longer or shorter space of time. Oftimes also, in spite of every precaution, and before the damaged portion of the intestine has contracted any adhesions, this last returns spontaneously into the cavity of the belly, and gives occasion to an effusion of the alvine contents into the said cavity, which may become speedily mortal; sometimes also the portion of intestine puffs up outside the aperture which has afforded it passage, and strangulation takes place, with all the mischiefs attendant on such a state.

After weighing well all these considerations, we are induced to believe that the method employed by the earlier surgeons, namely, that by suture, is to be preferred. We have only then to point out what mode of using it is the most advantageous, together with the means of seconding its most salutary effects; and of preventing the inflammation which ordinarily accompanies it. Such is the principal object of our reflections.

In putting in practice the suture of the wound of the intestine, we must specially have in view,

1. Bringing its edges into exact contact, and keeping them so.

2. We must be careful to comprehend the least possible quantity of the intestinal tube within the points of the suture, lest we too much diminish the diameter of the bowel, and cause any obstacle to the passing of the alvine contents.

3. The most convenient mode of effecting the suture is that by the over-cast-stich (à point par-dessus;) for, let authors say what they will, the re-union of wounds in the intestines takes

place, as in all other parts of the body, through the medium of their own proper vessels, and this mutual adhesion must be more or less ready and easy, in proportion as the edges of the wound are more or less exactly in contact, and to the attention which is bestowed in maintaining them thus by the suture alluded to. The various experiments made by us on living animals, and which were given in our lectures on anatomy and surgery, at Toulon, and the Val-de-Grace, at Paris; experiments which there will be no difficulty in repeating, have demonstrated the truth of the assertion which we have put forth respecting wounds of the intestines. After having made many on the intestinal tube, first laid bare by an incision of the belly on dogs of all ages, and with different views, we united those wounds by the furriers stitch (suture du pelletier) with the precaution of making it double by opposed stitches (en sens opposé), and with threads of different colours. These threads ought not only to be waxed, but also besmeared with some mild cerate. We ought also to take the precaution to leave the threads of a sufficient length, to enable us to retain them outside of the belly, up to the time of their extraction; and, as the adhesive inflammation is not accomplished before the fifth day, it will be prudent not to withdraw them till the seventh, and perhaps it would be more prudent to suffer them to remain till the ninth. In order to extract them, they must be softly drawn in opposite directions, the which can easily be done by means of the different colour of the threads. We must also have a care, on first making the suture, to replace the loop (anse) of the intestine within the cavity of the belly, in such a manner that it may move itself freely; because, if we retain it on the edge of the exterior wound, as in the process of Litre, we shall cause it to suffer a series of flexures, which will impede the course of the fæces, and produce tumefaction of its coats.

We propose the furrier's suture in preference, because the direct one (a point passé) recommended by authors, takes up too great a portion of the intestine, favours the puffing up of the parts, the displacement of the borders of the wound, and overthrows the very purpose which we seek to obtain: in reality, mutual adhesion can only take place by way of the lateral points of the lips of the wound. A degree of adhesion undoubtedly takes place between the edges of the wound and other ambient parts; but these unnatural adhesions, whatever may have been said to the contrary, are temporary; they are insensibly separated by nature during the progress of cure, in order to re-establish the peristaltic motion of the bowels, and also to favour the course of their alvine contents. Before remarking this disposition of these

adhesions, on this kind of parts and displacements of the intestines, we had observed the same phenomena in wounds of the belly attended with protruding epiploon, which, after having been attached to the edges of the wound affording it passage, by adhesions often of great extent, gradually disengaged itself from its restraints, and regularly retracted itself within the cavity of the belly, and resumed its natural and primitive situation.* If such were not thecase, the person in whom these organs so essential to life are hurt would be exposed to the greatest dangers, thus shackled by these deep attachments.† The adhesions even, which unnatural ani, when the fistulæ cease from re-union of the intestine, whether this union has been effected by the processes of Desault or of Dupuytren, these adhesions we affirm are gradually destroyed, and the parts become free in the cavity of the belly; the sooner, however, in proportion as the unnatural anus is the result of a limited division of the intestine, and the adhesions are more recent.

There will be little difficulty of convincing any one of the truth of these physiological facts, if he will repeat our experiments on animals. We have, however, to combat the inflammation which constantly supervenes on the mechanical irritation necessarily arising from the suture; and I can most certainly aver from experience, that in this case we need make use of no other means than the puncture cupping-glass (veutouses mouchetées) the application of which ought to take place immediately on the appearance of the first symptoms of inflammation. They should be applied in a parallel series from the upper to the lower part of the belly, imitating the march of the galvanic fluid from the positive to the negative pole; and these applications must be repeated as often as may seem necessary. The point punctures

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* See the Memoir on Wounds of the Belly, attended with protruded epiploon, &c. in my Work on the Campaigns.

† The whole of the fears alluded to by the Baron, need not, we are of opinion, be expected as a matter of course; in consequence of that power, so happily possessed by nature, of lengthening those preternatural adhesions which occasionally take place as a part of the natural cure of inflamed serous membranes. Where the parts which have been so united must necessarily perform active motions, the adhesions will in time lengthen to the extent required, to enable them to perform their proper functions without material impediment; and such may also be the case, where other circumstances are favourable, with those adhesions which take place between the injured intestine and the external wound. And there is no natural reason to expect that such elongation shall not take place; except the adhesions are so extremely strong and extensive, as that the elongation shall be accomplished with difficulty.—T.

(mouchetures) ought to be made with the scarificator invented by us, and in such a way as to suffer us to pass over all the reddened skin with the cucurbit, (which may be exhausted of its air for the purpose by burning a bit of fine tow in its bottom) in a manner similar to that in which we draw the bow of a violin over the strings, in order to produce a uniform sound.

This plan is far preferable to the use of the cupping-glass and the pnuematic syringe, with which a spring scarificator is used; and which necessarily gives pressure on inflicting the incisions as well as pain, and by consequence is more imperfect and dangerous; whereas our punctures (mouchetures) are uniform, and entirely under the command of the surgeon, and can be guided at his will. We ought to follow up these local depletives and derivatives with oily embrocations, and tepid bathings, emollient clysters, iced and mucilaginous drinks taken in small quantities, and often repeated—general blood-letting is rarely necessary.

This practice forms the foundation of the treatment which we have laid down, in a Memoir on Yellow Fever, which we have addressed to the Academy of Medicine at New Orleans. We hope that its success will be correspondent to our intention; as the yellow fever appears to consist essentially in a degree of inflammation more or less intense, of the serous and mucous membranes of the abdominal viscera, the principal symptoms of which are pains in the bowels and vomitings, similar to those of the spontaneous cholera morbus, a disorder from which the yellow fever does not essentially differ. The cholera morbus, which succeeds to a mechanical injury, which has acted directly on the intestine, pursues the same march, and may be attended with the same results: now, the indications are the same in all these kinds of affections.* When we have successfully com-

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* Our friend, the Baron, may run some risk of stepping out of his sphere by pushing his opinions in these matters to the extent he proposes. Fever, idiopathic fever, with particular derivation to the liver and intestines, can not be expected to have so many points in common with membranous inflammation, arising from lesion of substance, as that the means recommended by the Baron shall necessarily prove effectual. That medical men, with all their care and knowledge, should prove unsuccessful in curing the disease, is by no means to say that slight scarifications must succeed; they may be of use; but though fever be commonly attended with inflammation in one part or other, yet fever is not inflammation, nor is inflammation fever. And though the scarifications may be of great use in any inflammation which may arise in the peritonæal or mucus membranes, or in the substances covered by both, yet the curing or relieving of these does not imply the cure of fever.—T.

batted the accessary inflammations by the means pointed out, which may be known by the cessation of the symptoms, that characterise the acute phlegmasiæ of the gastric intestinal system, we shall advantageously concur in the re-establishment of the peristaltic motion of the intestines, and in favouring the alvine evacuations by means of calomel associated with recent castor oil and syrup of succory, in proper and relative doses; by embrocations of camphorated oil of camomile on the belly, and by anodyne emollient clysters. Sometimes we are obliged, especially in case the swelling of the wounded parts takes on a chronic character, to apply vesicatories on the belly, sprinkled with equal parts of cantharides and camphor, having previously taken the precaution of exposing the flies to the vapour of boiling water, in order to destroy their volatile irritant principles without depriving them of their suppurative property. Finally, we finish the treatment by the use of light tonics, such as bitter infusions rendered aromatic, by orange flower water, and by frictions, dry or slightly alcoholized, over the whole of the body.

It is quite necessary to restrain the convalescent to a severe regimen, in order to prevent any congestion in the stitched part of the intestine, which remains for a long time in a state of contraction and inexertion, more or less considerable in its degree.

The following case will undoubtedly best display the phenomena which accompany wounds of the intestines effected by polished weapons, and treated by the suture; whilst it will at the same time confirm the precepts, which we have laid down respecting this mode of treatment. The subject of our observations is named Jean Baptiste Jolin, aged twenty-five, a musqueteer of the sixth regiment of Guards. Being at play with one of his comrades in the fields near his barracks at Courbevoie, April 27, last, he fell by carelessness, on a naked sabre which he held in his hand, and gave himself a deep wound in the abdomen. He was taken to Puteau, a neighbouring village, where the physician, M. Carré, first rendered him assistance. "This soldier," said M. Carré, in a letter to me written after the recovery of the patient, "laboured under a transverse wound of about fifteen lines long, on the lower part of the belly on the right side, attended with a strong protrusion of the ileum, which had already become tumified. He experienced great nausea, but without vomitings. I examined the protruded portion of the intestine, and found a wound of some extent upon it, from which there was a stercoraceous discharge, which impelled me to close it by the overcast suture (a point par-dessus), and I immediately replaced it in the ventral cavity. I was unprovided with needles and thread,

and a female standing by, lent me her needle containing a portion of black thread. The wounded man was then dressed, and sent to the Hôpital de la Garde at Paris." During his journey, which was a very painful one, he had many copious vomitings and a bloody alvine evacuation.

On his entrance into the Gros-Caillou, the surgeon of the guard removed the dressings, and discovered a tumified portion of the small intestine, without any appearance of its having been wounded, which he immediately returned into the cavity of the belly, without much effort. The patient was in such an extreme state of debility that he could give no account of what had passed; the surgeon of the guard too, having no particular view respecting the portion of displaced intestine, contented himself with following up the indication offered to him, by the operation of taxis: he forthwith applied a contentive set of dressings, and administered emollient drinks, and emollient clysters to the patient. He was not, however, relieved by them, and he passed the rest of the night in a permanent state of anxiety, and had during it many vomitings of bilious matters, accompanied by violent colicky pains, tenesmus, and slightly sanguineous alvine discharges.

In our visit in the morning, we examined the wound described above, which was then unattended with protrusion of any of the contents of the belly; and there seemed nothing to be apprehended respecting the patient. He only told us, that the surgeon, who first dressed him at Puteau, had asked a woman present at work for the needle and thread which he saw in her hand, but he did not recollect whether any use was made of it, because he had perceived nothing farther.

Conformably, however, to our own precepts, we dilated (debridâmes) the wound of the teguments and the opening made by the sabre to the aponeurosis of the great oblique muscle, which enabled us to discover through a considerable sanguineous accumulation, established behind the wound and in the peritonæal cavity, many circumvolutions of the intestine, which had already contracted adhesions one with another. Strong as the symptoms of internal strangulation appeared, we durst not tear these adhesions for the purpose of seeking and examining the strangulated portion of the bowel, lest we should increase the effusion, and re-open the arterial vessels, which might be situated at the point of re-union. Hence then we contented ourselves with causing theblood effused into this kind of reservoir to be evacuated, and dressing the wound with a linen in which holes were cut, spread with storax ointment, lint, and an appropriate bandage.—A small branch of the ileo-lumbar artery having been

divided in the incision, a ligature was placed on it, and the bleeding ceased.

The patient's pulse was small and frequent, the countenance pale and discoloured, the eye dull and watery, the extremities cold, he laboured under frequent nausea and vomitings, at very short intervals, followed by slightly tinged bloody evacuations of the alvine canal, accompanied by colicky pains, tenesmus, and tympanitic belly. This alarming state disquieted us much, and we despaired of bringing the patient safely out of the imminent danger to which he was exposed. Nevertheless, before instituting any new search in order to discover the strangulated loop (anse) of the intestine, we were inclined to employ the puncture cupping-glass (ventouses mouchetées) which I had seen to succeed almost to a miracle in cases of spontaneous volvulus.* We had scarcely applied the third or fourth cupping glass, when the tympanitic state of the belly sensibly diminished; the patient experienced relief, and he had in a little time several evacuations of a biliary matter, mixed with clots of blackish blood, by the anus. We repeated the application of this derivative topic, in such a manner as to cover the whole of the surface of the abdomen. We followed our cuppings with camphorated oily embrocations, light anodyne cataplasms, and clysters of the same nature; the exhibition of the latter of which was again attended with slight biliary dejections, mixed with some streaks of black blood.

The succeeding night he was sufficiently calm, but in the morning the colic pains returned with great violence, and were accompanied with vomitings. The almost instant success before obtained by the cupping-glasses led us to use them again. We insisted also on the use of emollient embrocations, mucilaginous anodyne iced drinks, and especially emollient clysters. We again obtained a sensible improvement, all the accidents had entirely disappeared, and thus suffered the patient to have some repose for eight or nine hours. They returned nevertheless, and about the same hour. During their presence, the belly became tympanitic, the alvine evacuations ceased, the urine became scarce and limpid, the colic pains became more or less lively, and the pulse experienced corresponding variations. In short, we had so often seen the patient in such extreme danger, that we did not expect him to live from one moment to another. Yet, after having repeated, and at several different times, the application of the cupping-glasses both dry and with the scarificator; having still

* We could relate many cases of its good effect, and have to regret our not having made use of in the colic of Madrid.

insisted on the use of sedatives, with mild purgatives, more especially administered in the shape of clyster, we obtained a visible amelioration, and with so much advantage, that we then began to conceive hopes of saving the patient. To assist us in attaining this happy result the more readily, we applied a blister over the whole surface of the abdomen, which was sprinkled with equal parts of camphor and cantharides, subjected to the vapour of boiling water. We had now arrived at the eleventh day of the accident, when in the same night the disease came to a crisis by two phlegmons, which formed in the regions of the parotids. In effect, from that moment all the inflammatory symptoms of the belly almost in an instant disappeared, and the patient on the thirteenth day had copious evacuations of fœcal matter, prepared without doubt by a few grains of calomel administered during the night in a mixture of castor oil and syrup of succory. We favoured the suppuration of the tumours about the parotids by means of maturating cataplasms, and the moment that fluctuation manifested itself, we applied caustic potash, which accelerated the suppuration and made way for the exit of a large quantity of purulent matter, that had formed in the cellular structure of the regions alluded to. This salutary crisis was immediately followed by the issue from the wound of the belly, of a thread of about three inches and a half long, of a black colour and single, knotted at the extremity which first presented itself at the wound, and by which we extracted it, in the presence of the young medical men, who attended my clinical lectures on surgery, the principal subject of which for that day was the case of Jolin.

The unexpected extrusion of this thread had afforded sufficient proof of what the patient had before told us, that a suture of the intestine had really been made, and then it seemed easy to account for the cause of all the phænomena which we had observed during the course of this violent disease; this last circumstance caused us to write to the country medical man, who had first rendered his assistance to our wounded patient, in order to learn from himself what had passed at the time of his first application, the result of which we have given before in an earlier page.

The patient went on improving, and quickly became convalescent; his convalescence, however, was slowly and painfully performed. The wound of the belly cicatrized readily, and all the functions gradually became re-established; the patient was completely cured by the sixtieth day from the accident, and I left the hospital on the seventieth.

Every circumstance announced that the adhesions we at first

perceived amongst the circumvolutions of the intestine, (and we think it was the ileum which was concerned) detached themselves spontaneously, and that as certainly in proportion as the peristaltic motion of the intestine became re-established, as the cause of irritation disappeared, and as the cicatrization of the wound of the intestine became completely united. The kind of needle, and the mode of suture, greatly contributed to this successful termination.

Under the article NEEDLE in the Dictionary des Sciences Medicales. We have observed, that the ordinary sewing needle of rather slender construction is preferable to that usually made use of in wounds of the teguments. [See article Aiguille, for the reasons advanced in support of that opinion.]

The hæmorrhage which took place in the earlier moments, in the case of Jolin, both from the exterior wound and from that in the intestine, arose from the division of the large number of small arteries, both in the parietes of the abdomen and in those of the intestine itself. It appeared sufficiently evident to us, that the inflammation, which had seized all the membranous viscera in the cavity, was advantageously combatted by the reiterated application of the cupping-glasses, both in the dry way, and combined with the use of the scarificator. Finally, we cannot too strongly recommend the employment of this curative remedy in acute phlegmasiæ of the belly, as well as in those of the chest; and we are perfectly satisfied that they powerfully contributed to the safety of our patient, whose recovery was so remarkable.

ART V. *Ueber die steinigen Concretionen der Thränenflüssigkeit.**

On Lacrymal Calculi. By Professor Walther, of Bonn.

THE ossifications and calculous concretions which are met in various parts of the body, in man and in animals, are not essentially different from each other; for the so named calculous concretions consist principally of phosphate of lime, or other salts not alien to the basis of bone. The processes by which soft parts ossify, and concretions form in the fluids, seem to be one and the same. For since in the case of ossification, (of the coats of the arteries for instance,) it is not these coats

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* From Gräfe and Walther's Journal.

which actually become bone, but the osseous matter is deposited by the vessels, and consequently form the contained fluids, between the meshes of their constituent textures; and since, in the case of solid concretions forming in the urine or bile, these do not originate by chemical affinity, but from morbid actions of the coats of the urinary and gall bladders, it must be manifest that in ossification of the fluids, and in the formation of concretions, the soft parts concur in both, and that there is consequently the greatest correspondence in these processes.

Calculous concretions have been met with in almost every part of the body; in the brain, in the meatus auditorius externus, the salivary organs, and in the eye, in the heart, stomach, intestinal canal, liver and pancreas, in the urinary passages, uterus, the cloaca of some animals, and in the cavities of the joints.

It is but rare that they occur in the eye. Morgagni and Haller found lamellæ of bone between the choroid coat and retina. In the cataracta ossea, the lens is as hard as stone. An ossified lens of this kind which I subjected to analysis, consisted of albumen, phosphate and carbonate of lime. The corpus vitreum has been several times found changed into bone. Rudolphi will not allow this to be the case, but asserts that the osseous concretions which are met with in collapsed eyes, do not arise from the ossification of any particular part, but are produced as a morbid secretion from the vessels of the choroid coat. However, I possess a real ossified corpus vitreum, which was still covered with the retina when I removed it from the eye. The concretion has the exact form and size of the corpus vitreum, it rings on being struck with a metallic probe, and after being kept many years in spirits, it still preserves the original shape and real disposition of that body.

Lacrymal calculi were met with in the lacrymal canals, by Blegny.* Schmuker† and Sandifort ‡ say they have found them in the caruncula lacrymalis. It is remarkable that even in cases of complete closure of the nasal canal they have never been found in the lacrymal sac, now constantly filled with tears. That calculous concretions, however, may form in great numbers and in very short time from the tears, is demonstrated by the following case:—

Anna Lichtenwaller, a fishmonger's daughter in Landshut, a

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* Zodiacus medicus Galliæ. Ann. 1. Mens. Martii Obs. 8 et 13.

† Verm. chir. Schriften, B. 3. Seite 251.

‡ Mus. Anatom. a L. Vol. I. Sect. 6. Nvo. I.

healthy blooming girl, regularly menstruated, had a small piece of lime fall into her left eye in the year 1811, as she was cleaning the ceiling of a room, from which it came off. I removed it, and the eye suffered no further inconvenience.

Two years afterwards, February 1813, she was first attacked with severe tooth-ache, both in the upper and lower jaw.—She had several decayed teeth, in which the pain was particularly violent, extracted; but merely with temporary relief. Soon after this she had an attack of rather obstinate constipation with other symptoms of colic; but by clysters, fomentations, &c. it was removed. Towards the end of the same year she began to complain of a burning stinging sensation in the left eye, which was most severe when the eye or eyelids were moved, or when she was exposed to bright sunshine, &c. On closely examining the organ, a small white angular piece of stone was discovered laying between the eyelid and eyeball, on the surface of the conjunctiva, and towards the external angle of the eye. On being removed from the eye, it was found to be the size of a pea, and was readily rubbed down between the fingers into a greasy sandy powder. Although the patient firmly denied that any foreign body had fallen into her eye, I at first thought that the substance removed was a piece of lime which had got into it. I was not a little surprised, however, when the patient returned to me three days afterwards, and shewed me a calculus exactly like the first, lying in the very same place.

The eye was now considerably inflamed; the pain was not limited to the eye alone, but extended to the brow in the direction of the supra-orbitary nerve. There was a proportionate sensibility to light, and increased flow of tears. The inflammation of the eye had commenced the preceding evening, accompanied by a violent paroxysm of fever, with shivering succeeded by heat. Although the newly formed calculus was immediately and readily removed, still on the following morning, after a restless and suffering night, the violence of the inflammation was much increased, and on the conjunctiva of the under eyelid another white crumbling concretion was perceived, which by the succeeding day had attained as large a size as the former one. The upper eyelid was inflamed, and the margins of both swollen. The inflammation was so violent as to require blood-letting, and other antiphlogistic remedies. By these, some alleviation was effected, but four days afterwards another bleeding was necessary, from an increase of the inflammatory symptoms.

In the mean time the formation of calculi at the same place in the affected eye not only proceeded, but larger concretions of the same kind were produced with greater rapidity and in

shorter time. The calculi were now removed twice a day, and at length three times a day from the eye.

Knowing no better remedy in calculous affections of the kidney to prevent the formation of uric acid calculi, when accompanied with a proper attention to diet, than a solution of purified salt of tartar, I ordered the following medicine for our patient as a trial :—

℞ Kali Carbonic ℈ gr.
Solv. in Aquæ Cinnamon simpl. ℥ iv.
Add Syrup. Diacod. ℥ ß. M. D. S.

Half a table spoonful to be taken four times a day; along with this the patient drank copiously of an infusion of the herba jaceæ.—After using these remedies for six days, during which time the urine was muddy, fetid, and deposited a copious sediment, the activity of the calculus forming process became greatly diminished. In the course of twenty-four hours there was but one, and that a smaller concretion, formed, and at length merely a white crumbling powder, which no longer consolidated into a solid mass, and only required to be removed every two days. But while the disease in the left eye decreased and disappeared, it attacked the right, and at the same part of the conjunctiva, between the eye-ball and under eye-lid. Its course was here exactly the same; at first the calculi formed in fewer numbers and more slowly, afterwards more rapidly and in greater numbers; with this the inflammation of the eye was at first moderate, and afterwards more severe, and likewise rendered two bleedings necessary. Nevertheless, the disease never attained the same height, and was of shorter duration in the right eye than in the left. However it gradually decreased as it had increased; the concretions appeared at greater intervals, and smaller, and at length entirely ceased.

The whole course of the disease occupied nearly ten weeks. But as the patient's chest seemed to have suffered a little from the repeated blood-lettings, altered manner of life, and perhaps from the continued use of alcaline medicine, for there was a troublesome cough, with considerable expectoration, particularly in the morning, and altered appearance. I ordered her an infusion of Iceland moss, and better diet, and in three weeks she had acquired her former blooming appearance, and was free from all complaint.

Some years after this, however, she was again attacked with the same disease. Concretions of the same colour, size, and other appearances, formed in the right eye: at first they lay between the eyeball and under eyelid, and afterwards between the eyeball and upper eyelid. In the course of a few days the

formation of calculi began in the right eye. On this occasion both eyes were less severely inflamed, and the disease was likewise of shorter duration; for I ordered her the solution of potass immediately, and the number of the daily generated calcuil soon diminished, and the whole process ceased in shorter time.

The concretions, which by degrees had formed in considerable numbers, in both eyes, were examined by my worthy friend Mr. Fuchs, the Aulic counsellor in Landshut, and they consist of, 1. carbonate of lime, which forms the greatest part of their weight, with traces of 2. phosphate of lime, and 3. coagulable lymph or albumen.

I possess a considerable number of these concretions, which I would propose to call Dacryolites.

Art. VI. *Observations communiquées à la Société de Medicine-Pratique de Paris; par M. Barde, Chirurgien à Castanet, (Haut-Garonne.)*

General Inflammation of the Arteries:—M. Bach, the subject of the following remarks, was register of the justice of peace of the canton of Castanet, of a sanguineous temperament, tall, descended from a father who died of consumption at thirty-two years old, and a mother subject to frequent spittings of blood.

At the age of twenty, having hitherto experienced uniform good health, he entered into the army, and was employed in the recruiting department, which caused him to make long journies and forced marches on foot, and during five or six years he was exposed to every change of weather.

Having retired from service at twenty-seven, he was seized the succeeding autumn, with acute rheumatism of the lower extremities, which disappeared on repeated applications of leeches and emollient clysters. Seven months afterwards, (in March 1816), he was seized with pains in the epigastric region, extending betwixt the shoulders, accompanied with a dry and frequent cough;* some fears were entertained lest these symptoms indicated an attack of phthisis pulmonalis; and he was accordingly subjected to a mild and cooling regimen, which produced a marked amelioration. In the month of July fol-

* Are not these symptoms in rheumatic subjects often, if not mostly, symptomatic of some affection of the diaphragm?—T.

lowing the same symptoms recurred with increased violence, accompanied by strong palpitations of the heart;—the same regimen had a sensible good effect. In the month of March 1817 he had a new attack; the pain in the epigastrium was extremely acute, and extended, girdle fashion, to the loins; the pulsations of the heart were very strong, and augmented when the patient took the slightest exercise; the cough more frequent; and the whole attended with irregular shiverings, and a sensation of constriction in the epigastric region. At the end of a few days he had an intense pain in the head; fever took place, which continued without any marked exacerbation; the pulse was frequent, full and hard, and the pulsation of the superficial arteries visible to the eye; the skin presented no sensible accumulation of heat, but the patient complained of great internal heat; the general appearance was pallid; and he still retained an appetite and a desire for cooling aliments and acidulous fruits.

Being called in to attend him, I prescribed the application of a dozen leeches to the fundament, a cooling mucilaginous ptisan, and restrained his diet; in three days, however, I was compelled to yield to his urgent requests, and administer food, which I limited to milk mixed with barley water, and weak broths. This regimen, conjoined to the repeated application of leeches to the fundament, amended the symptoms by little and little; so that he was enabled to take slight exercise, and at the end of fifteen days he was enabled to resume his employment as register. The slightest fatigue, however, reproduced the oppression, and instantly recalled the pains and palpitations; which indeed never ceased; he always kept himself in a slightly bent posture, and often applied his hand to the epigastrium, which he said rendered his disorder more supportable. Rubefacients to the anterior and posterior parts of the chest rendered the respiration more easy, and a vesicatory applied to the left arm, and kept open a sufficient length of time, appeared to lessen the violence of the palpitations of the heart.

Our patient continued in this state till the summer of 1818, when the disorder took on a most alarming character: the oppression of the chest became extremely violent, the cough almost incessant, and returning by spasms, occasioning a sensation of tearing to pieces; he could only rest in his bed when half bent; the pulsations of the external carotid, temporal and radial arteries, together with those on the back of the hands, &c. were visible several paces distant; and those of the heart extended to the epigastric region, in such a manner as considerably to elevate it on each pulsation. I was unable to procure any, even momentary relief, except by frequent application of

leeches to the fundament and epigastrium, and abstinence; but the patient in two or three days became extremely desirous of food, as on first taking it he felt some transient relief. The general appearance was always extremely pale, so much so, that on the most violent appearance of fever it never altered its colour. Emaciation, which hitherto had only made an insensible progress, now made such rapid marches as to become very great in a few months.

In the night of the twenty-fourth of October, the patient was seized with a violent shivering, which was followed with intense heat, and a sense of suffocation. I reached him at five in the morning, when I bled him copiously on the right arm, which produced a sudden calm; the blood taken away was almost instantly covered with a dense whitish crust, of extreme thickness. After having once more repeated the bleeding, the patient was relieved for fifteen days; but on the eighteenth day he experienced a similar attack, which yielded to the same means. These exacerbations returned from time to time, especially when the patient neglected his slender regimen, but they became less violent. He resumed his employ, but being obliged to take long walks, at the commencement of the year 1819, his complaints returned, and his state became more alarming than ever.

The doctors Viguerie and Cabiran, being called in, they did not hesitate to confirm the opinion which I had entertained, that the case was a general inflammation of the arteries. In spite of all that could be done to arrest the progress of the mischief, the attacks became more and more frequent; the disturbance in the capillary arteries produced œdema of the whole body; he laboured under continued oppression and was necessitated almost always to sit up in bed, attended with violent faintings on the slightest motion; altogether announcing the existence of a serous effusion into the cavities of the pleura, and not unlikely also into the pericardium. The hunger was so intense, that the patient incessantly called for food, insomuch that there was great difficulty of bringing him to any reason on the subject.

Dr. Rouzet being at Thoulouse in the month of April, I begged him to see the patient; when he found him with a countenance of a yellow earthy tint; the skin cold and humid, the cellular membrane gorged with fluid throughout the body, and in spite of these symptoms, the pulsations of the arteries so visible, that they might be perceived at twenty paces distance. A few days afterwards, the skin became affected with a degree of speckling in different parts of the body, and he died on the sixth of May.

Appearances in the Dead Body :*—The pleura, the pericardium, and the peritonæum contained a considerable quantity of serous fluid. We found a few tubercles here and there in the lungs, in a state of dissolution. The heart was found much larger than ordinary, by the dilatation of its four cavities, the membrane lining them being of a brown colour, covered with a mucous coating equally brown, and scattered over with plates of brown or dark red. On removing the mucous covering, and examining the parts with care, the internal membrane was found to be destroyed where the red plates were seated; in the remainder of its surface it was sensibly thickened, and adhered so strongly to the muscular substance as to render it impossible to be detached. The valves, and particularly those of the right ventricle, were infiltred† with a reddish mucous fluid. The ascending aorta, the carotids and the branches they give off, both to the face and brain, the subclavian, and the brachial arteries, with the divisions of this last to the collateral arteries of the fingers, all had their external coat thickened, hardened, of a dark red colour, and covered with whitish purulent matter; between the internal and the fibrous coats was a stratum of serosity of a lemon colour, and tolerably consistent. The pulmonary arteries and veins exhibited the same appearances.

The ventral aorta and its divisions supplying the abdominal viscera, were equally inflamed, and the thickness and redness of their tunic were strongly marked as far as the hypogastric and crural arteries; but the traces of this inflammation became fainter and fainter in the inferior extremities, in proportion as each portion of vessel receded from the main trunk of the artery.

The trunks of the two venæ cavæ, from the subclavian vein above to beneath the diaphragm below, participated also in the same inflammation to a high degree; their internal membrane and valves were thickened, red and ruptured on the slightest extension. The mucous membrane of the back part of the mouth and the œsophagus, were coated with a layer of viscous mucosity like the lees of wine, and which was easily detached; below, the mucous membrane itself was infiltred with a purulent serum. The mucous membrane of the stomach and the small intestines was reddish, and its vessels were strongly injected;

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* The body was inspected in the presence of M. Troy, the officer of health at Castanet.

† The term used here is so appropriate in the French language, that in defect of an English word answering readily to its meaning, it has been adopted with an English termination.—T.

it also tore easily. The liver was of great size, the spleen, on the contrary, was very small. The large epiploon very red, and its vessels more dilated than in its ordinary state; their interior surfaces showed manifest traces of inflammation. Finally, the little epiploon was of a dark red brown; its structure tearing with the greatest facility, whilst its vessels, which were gorged with blood, offered a stout resistance.

Note.—Inflammation of the arteries has not, as yet, been observed with sufficient accuracy to enable us to trace the general history of the disease. The greater proportion of isolated facts, which are to be found in the writings of authors, contain few or no details of the symptoms, which made their appearance during the life of the patient, and J. P. Frank was the first, I believe, who referred the developement of a particular species of inflammatory fever to this cause [*Epitome*, tom. I, § 118]. Next to this author, M. Portal has related an example of inflammation of the internal coat of the aorta, in a person who died a few days after a revulsion of the measles, attended with a most violent sense of suffocation, accompanied by violent palpitations of the heart [*Anat. Med.*, tom. III, p. 127]. In July 1819, M. Dalbant presented a thesis on *Arteritis*, to the Faculty of Medicine at Paris, in which he gives five cases of inflammation, of a greater or less extent, of the arterial coats. We were made acquainted a little while before this period with the observations, few in number, it is true, which Mr. Hodgson had mentioned in his *Treatise on the Diseases of Arteries and Veins;* and since then, M. Vaidy has reported an interesting example of the same disease in the *Complimentary Journal to the Dictionary of Medical Sciences*, Number VI, August 1819. But up to this time the foregoing account of M. Barde, appears to us to be the most remarkable as well as the most complete.

Sometimes the inflammation of the arteries takes place in consequence of, and after the pains arising from some great surgical operation: and such we find to be the case in the three first cases of M. Dalbant; at other times it arises spontaneously, without any known cause, as in the fourth and fifth cases of M. Dalbant, and in those related by Messrs. Vaidy and Barde. But there is one circumstance which appears worthy of remark, which is, the variableness of the symptoms presented by this malady, even of those which ought, it would seem, to furnish us with distinctive characters in any similar affection. Thus, in the facts detailed in M. Dalbant's dissertation, and in the case

reported by M. Vaidy, we remark the *smallness and irregularity of the pulse;* in that of M. Barde, on the contrary, the pulse was always *hard, full* and *frequent*, and the pulsations *sensible to the eye* in all the superficial arteries of the body. According to Frank, inflammation of the arteries always attends the onset of the symptoms of inflammatory fever. M. Dalbant notices, on the contrary, the rapid prostration of strength, and the symptoms of adynamic fever. But it ought to be observed also, that this last, in the cases with which he has favoured us, has found, as we have already said, that the inflammation of the arteries manifested itself, as the result of serious surgical operations, or even that it produced a new disease in its own right, sufficiently violent to exhaust the bodily powers: this takes place in the fifth case, which is entitled, *Gangrene of the right side of the abdomen, in consequence of the inflammation of the crural artery, attended by the formation of a false membrane in the artery.*

We shall only adjoin another reflection, M. Dalbant regards the redness of the internal surface of the arteries as *always* indicating an inflammation of these vessels, and adds, that in eighty-one subjects who died during the first six months of 1818, in the chirurgical department of the Hotel-Dieu at Paris, twenty-eight had presented redness of the arteries in different degrees. If it were enough from this character alone for us to say that inflammation existed in such cases, arteritis would be nothing near so rare a disease as has been supposed; but Mr. Hodgson has advanced doubts respecting this opinion, which appear to us to be well founded. Besides having found this redness in people who have died under very different diseases, he observes, that it does not extend beyond the internal coat, and that the said coat is not even thickened; M. Laennéc too, whose work has been published since the thesis of M. Dalbant, professed himself of the same opinion with that of Mr. Hodgson. M. Laennéc, who has always attended with exactness at all the openings of the dead bodies which offered in the hospital, says, that he has never observed this redness with *thickening* of the membrane of the arteries; seeing that M. Dalbant, who was his pupil, professes to have derived his fourth case from the hospital Necker, in the very halls of the same M. Laennéc, wherein it is said, " that the redness was not bounded by the internal membrane, that it was softened and unequally thickened, and it extended to the two other membranes."—We cannot but remark this contradiction between Laennéc and his pupil, because it bears on a subject as yet liable to many differences of opinion. We wait the result of

the researches of Dr. Breschet, who is said to be engaged on this subject, with great impatience.—(L. R.)

The following is the communication of M. Vaidy, alluded to in the above Notes of L. R.

It is to Professor Franck that we owe our knowledge of inflammation of the arteries, as he was the first who called the attention of medical practitioners to this important subject. * Neither Doctors Baillie † nor Prost ‡ have mentioned the disease in their Treatises on Pathological Anatomy; not one example of it occurs in the sixty-one volumes of that rich collection, the Journal General de Mèdecine, edited by Mons. Jean Sedillot; and Professor Portal, up to the time of the publication of his Anatomie Medicale, in 1804, had only met with a single case. || Our late and esteemed colleague Savary, informs us that reddish pustules, or ulcers, have sometimes been found in the interior of the aorta, which led him to think that it is susceptible of becoming affected with inflammation; § but that he has not himself seen such alteration, though he has opened a large number of dead bodies. Inflammation of the arteries is spoken of in a manner more precise in the Dictionnaire des Sciences Medicales,** but unfortunately†† you have not seen it yourself, and have never been able to find any account of it in any works preceding our times, which would enable you to give any detailed account of it.

After what has been said, you will perhaps think with me, that it may be useful to add the following fact to the small number of those which are hitherto known. I also take advantage of this opportunity, to request medical men, who possess the advantage of hospital practice, and who have the power of pushing their researches in Pathological Anatomy, not to neglect slitting the trunks of the blood-vessels to a great length; when,

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* De curandis Hominum morbis Epitome, Tom. I. § 118.

† Morbid Anatomy, &c. London, &c.

‡ Medicine eclairée par l'observation et l' ouverture des corps. Paris, 1804. 8vo.

|| Cours d'Anat. Medic. Tom. III. p. 127.

§ Diction. des Sciences Medicales, Article Aorta, Tom. II. p. 218.

** Tom. II. p. 319.

†† The editor is the same, both in the above cited Dictionary, and in the Complementary Journal to it, from which this account is taken. No. for August, 1819, p. 181 et seq.

I am persuaded, they will soon discover that inflammation of these vessels is not so rare as it has been supposed.

Case. Le Ralu, a veteran soldier, aged forty-two, was admitted into the military hospital of Val-de-Grâce, on the twenty-seventh of September, 1818. He laboured uuder all the symptoms which characterize organic lesions of the heart, when arrived at an advanced period of the disease; such as swelling of the face, with a bluish tint of the lips; œdema of the different parts of the body, and particularly of the legs and hands; the pulse obscure, unequal in the region of the heart, as also in the radial arteries; together with increased and laborious respiration, with a sense of imminent suffocation. These last symptoms increased especially during the night, for a few days before his death, which took place October the 16th, twenty days after his admission into the hospital.

Examination of the body thirty hours after death.—External Appearance.—General œdema, with coloured patches on different parts of the body.

Chest.—The lungs were suppurated in certain points. The heart was voluminous, its four cavities strongly developed and thin, especially the left ventricle, which was of a livid tint, and tore with facility. The internal membrane of the same ventricle was very thick, and presented signs of a former phlegmasia. The internal membrane of the aorta was equally thickened, and of a deep brown red colour, except in some points on its upper part, where it was lighter coloured and sensibly depressed. The same alteration in colour and structure was also continued along the aorta to the feet, but diminished progressively in its intenseness, as it approached the feet and the arms.

Abdomen.—Slight traces of phlogosis in the small intestines. The skull was not opened.

VAIDY.

It has been thought advisable to add the remarks of Jourdan, in the Dictionnaire des Sciences Medicales, referred to by M. Vaidy above, when speaking expressly on this subject. Panckoucke is addressed as the editor of both works, the observations on arteries, however, are signed Jourdan, as hinted just now.

"Inductive reasoning would lead us to suspect that the arterics themselves are liable to inflammation, especially, if we consider the large number of vessels and nerves they receive; but such a disease was unknown till of late, and we yet are so deficient in cases in point, as to be ignorant of the symptoms and the causes, as well as of the treatment they require. The disease has hitherto only been recognised after death, when we find the internal

membrane of the arteries to be reddened and their coats enlarged, often adherent, covered with albuminous concretions, and even pus. It is probable that this affection happens on all occasions when the arteries are tied, or where they experience lesions of any kind: possibly too it may accompany phlegmasiæ and inflammatory angiotenic fevers. The observation of Hunter, who has often remarked a lively degree of heat in the neighbourhood of the vessels, would seem to insinuate the same; as do also those of Frank, who asserts that he has seen the vascular system inflamed in an inflammatory fever, and also in phlegmasia of the heart."

The author of the concluding remarks on M. Barde's case directly asserts that there was no obvious cause for the inflammatory disease of the arteries, in the case detailed by their author. But in differing from his opinion, we think it necessary to call the attention of our readers to the effect of rheumatic inflammation, when it attacks the heart and large blood-vessels. In the acute case of inflammation of these parts, which attends active inflammatory rheumatism, the symptoms are marked enough to render little doubt of the nature of the affection, and its effects sufficiently obvious. Now as every acute case has its corresponding chronic one, we can suppose that there may be a chronic case of rheumatic inflammation of the heart and arteries, as well as its opposite. The case detailed by Barde seems to afford little doubt respecting the possibility of such an exciting cause, particularly as no other was apparent. The fifth case of the successful application of moxa, to be found in the Analecta our present Number, would seem to tell us that rheumatism may chronically affect certain organs, and why not amongst the rest the heart? Observations are yet wanting to determine this question, but the subject is worthy of attention, and it is to be hoped that the matter will be inquired into.

The late Dr. Adams, during the latter period of his life, had begun to take up the subject of rheumatic and gouty inflammation of the heart and large blood-vessels; but death robbed us of his valuable services in this particular. A case occurred to the translator, within the last few weeks, which seemed in many respects to resemble that of Mons. Barde: it was in a young lady of about twenty-two or three years old, who has for many years, five or six at least, laboured under slight rheumatic attacks, but which of late have seized the heart and neighbourhood with occasional slight affections of the joints. Bleedings, and antiphlogistic regimen has hitherto abated the attacks, one

of which we saw thus reduced: The mother was of a rheumatic and delicate constitution, and which greatly resembled that of her daughter—the latter is still living. The attacks of the heart, which are often renewed (say once in a few months) are dreadfully distressing.—T.

ART. VII. *Recueil des Éloges Historiques, lus dans les Seances Publiques de l'Institut Royal de France. Par M. le Chr. Cuvier, &c.* Paris, 1819.

M. CUVIER has published a collection ofEloges, read by him at the public sittings of the Royal Institute of France. They may be considered as a continuation of the series of historical orations in honuor of the learned members of that Institution, commenced by Fontennelle, and continued by Mairan, Fouchy, and Condorcet. The utility of a work conducted with talent on this plan is sufficiently manifest. The Royal Academy of Sciences has from its commencement included amongst its members almost every philosopher of note, whose labours contributed to the advancement of human knowledge. A faithful sketch of the life and discoveries of these great men will, therefore, afford an interesting view of the progress of science in general, and the public testimony of esteem thus bestowed on their talents and researches will prove a powerful stimulus to those who are entering on the difficult and thorny path of scientific inquiries.

Independent of the interest excited by a detail of the works and discoveries of great men, and the progressive march of scientific improvements which they exhibit, there is a peculiar gratification arising from being thus introduced, as it were, into the private and intimate society of men, whom we have adored as almost super-human, to contemplate their characters, their virtues, and even their failings, as they are accurately traced by an able hand. It is the sentiment of true happiness and calm serenity, which always pervades a life devoted to the cultivation of science, that renders these éloges so attractive and useful. It is the long succession of venerable septuagenarians, and octogenarians, who have attained the summit of human glory, by enlightening the world, and the comparison of their enviable lot with that of those beings who have sought that glory by desolating it. What tends to add still more to the pleasure derived from such a work is the perfect liberality which pervades it; we are introduced not only to the eminent men who have dignified the various departments of science, but we meet with the great

of all nations, co-operating in the good work of ameliorating the human race, at a period when their respective rulers are laying waste the fair fabric of creation. In the éloges of Fontennelle, we find perhaps the most eloquent and just tribute to the character and genius of Newton that ever was written; and in the work before us, we are gratified with a luminous view of the discoveries of Priestly, Cavendish, and other eminent men of our own country, whose services in the common cause are as readily appreciated, and as gratefully acknowledged, as those of the countrymen and associates of the author.

M. Cuvier has prefaced his work by some reflections on the progress of the sciences, in which he exhibits with great truth and eloquence the connection which subsists between the state of science and that of society in general. This introduction is in imitation of Fontennelle, and constitutes an able commentary on his beautiful prefatory discourse, "Sur l'utilité des Mathematiques et de la Physique, et sur les travaux de l'Academie des Sciences."

No man was more capable of appreciating the value of scientic labours than Fontennelle. He traced the progress of the important truths established in his day from their obscure and distant origin, in a humble experiment, theory or speculation, to the perfection and importance to which they had then attained; forcibly urged the value of discoveries and accumulation of facts, independent of their immediate or apparent utility; and looked forward with a prophetic eye to the vast improvements which were to result from a persevering search after truth. Yet sanguine as were his hopes, he could not have foreseen that, in the revolution of two or three generations, so much would have been accomplished, or that science would have effected such immense changes in the customs, commerce, and prosperity of nations, as appear from a perusal of M. Cuvier's discourse to have taken place. Even the discoverers of the most important truths which we now possess, were not themselves aware of their ultimate consequences, and it was almost unconsciously that the first observers became the benefactors of the human race. A botanist, whose name is scarcely known, brought the tobacco leaf from the new world into Europe, about the time of the League; that plant alone now furnishes a revenue to France of fifty millions, and is become an article of commerce and wealth over the whole world. Another botanist, by conveying a single plant of coffee from Arabia to Martinique at the period of the regency, has enriched the colonies and furnished a beverage in general use, which has contributed more than all the lectures and eloquence of moralists, to banish the abuse of vicious

liquors from society. And who will say that, even at this day, our botanic gardens do not contain some neglected herb destined to effect in our manners and political economy no less important revolutions?

The pre-eminent distinction of the revolutions effected by science is, that they are always happy. Where calamities, whether induced by internal policy, by accidents, or by the jealousy of surrounding nations, press heavy on the people, it is then that the resources of science are most conspicuous and successful in alleviating their misfortunes, and giving additional impulse to national industry, and a new direction to the resources of a country. In this way was France enabled in a great measure to avert the evils which must have resulted from the rigorous restrictions on her foreign commerce. It was the purely theoretical discovery of saccharine matter in other vegetables than the cane, that gave rise to the manufacture of indiginous sugar in France, which supplied its wants without the aid of Colonies, and took away the pretext of continuing the inhuman traffic in slaves; thus giving employment to thousands of labourers, and enriching the country without diminishing one atom of the former productions of the soil. If to this we add the practical inventions derived from the discoveries of Berthollet, Chaptal, Vauquelin, Thénnard, and others, the advantages which France has derived from the cultivation of Chemistry alone, must be incalculable. None of these advantages and treasures would ever have been procured without the aid of science. These are only the application of a higher order of truths, truths which were not sought after with that view, but whose authors, impelled by an ardour for the acquisition of knowledge, pursued it for its own sake, unconscious, in their elevated contemplations, of the new creations which were to arise from their words. The new professions which they established, and the colonies which they peopled, the plenty and the luxury which they diffused, and all the practical improvements resulting from their labours, were often foreign to their views. The moment a doctrine became practical, they abandoned it to the vulgar. And here we arrive at the proof of the remark from Fontennelle, with which we set out, respecting the importance of scientific discoveries, independent of their immediate or apparent utility; and here we must take leave of M. Cuvier's beautiful illustration of the influence of science on civilization. Our limits will not permit us to follow him through his luminous exposition of the application of animal and mineral chemistry to the arts, of the changes effected by the power of steam and the use of gas, which are all the fruits of science.

Medicine being a science essential to the comfort and happiness of mankind, and its cultivation being calculated to develope some of the most wonderful and interesting operations of nature, it could not have stood still while every other branch of knowledge was making such progress; accordingly, though it has not advanced with such brilliant eclat as some other branches of science, it has been cultivated with an ardour and philosophical spirit which have led to the most important improvements in practice. Some of the éloges before us are dedicated to commemorate the talents and industry of those who have dignified the profession, and contributed to alleviate the sufferings of humanity. The first of this class who comes under our notice is M. Lassus, Professor of external Pathology at the Ecole de Médécine, a writer, whose works, we think, are too much neglected.

Pierre Lassus was born at Paris on the 14th of April, 1741; his father was a respectable practitioner of surgery, and destined his son to follow the same profession. After having applied for several years to the study of surgery, he was admitted as master, in 1765. Being anxious to acquire reputation, he began to give private lectures in anatomy, and obtained a sufficient number of pupils to induce the Academy of Surgery to confide to him the office of Demonstrator. His success in the chair in a short time procured him the confidence of the public, and his reputation soon led to his being called to the Court. He was nominated in 1771, Surgeon to the Princesses Victoire and Sophie of France, daughters of Louis XV. In this situation he had ample opportunity for studying his profession in books, but thereby lost the advantages to be derived from practice, which is indispensible to the successful exercise of the profession. Lassus preferred his books to his patients, an error for which he was severely punished. Being called to bleed Madame Victoire he pricked her arm twice, but, whether from the agitation of the Princess, or his want of skill, the blood would not flow. This little event made a great noise. The courtiers marvelled at the frightful accident, the physicians about Court shook their heads with a mysterious and significant air, and poor Lassus was very near being disgraced. Fortunately for him the Princess was wiser and more generous than those by whom she was surrounded. She remembered the conduct of a lady in the time of Louis XIV., who, being mortally wounded by a surgeon, settled a pension on him for life, observing, that in all probability the poor man would never be called again to bleed a patient; and as the princess got better over the accident, she continued her liberality. Not being able to keep M. Lassus in her house,

she still allowed him to retain his title, and supplied him with funds to purchase a situation, to which was attached the office of inspector and treasurer of the College and Academy of Surgery; and in 1781 he was appointed professor of operations. Here his unlucky accident was forgotten, and he acquired both fortune and well merited reputation. His benefactress had no less reason to be satisfied with her magnanimous behaviour. In him she found the most devoted servant, and what is still more rare in Courts, a servant whose attachment did not end with the fortunes of his mistress. When the turn which the Revolution took, had obliged the aunts of Louis XVI. to quit France, M. Lassus, who shared their confidence, did not hesitate a moment to follow them; not that he expected his situations would have been preserved for him during his absence, or that he was ignorant of the measures that had been determined on against emigrants; his motive was still more commendable, he saw the misfortunes of the Princesses, and how much they stood in need of his assistance in their painful journey. The times in which we live have been distinguished by more reverses of power and fortune than any other, and consequently they have afforded more opportunities for the exercise of virtue and fidelity; but the examples have not been equal to the opportunities, and it is not therefore uninteresting or useless, to give publicity to those with which we have met.

M. Lassus traversed Italy with his Princesses, and remained some time at Rome, where he viewed the beauties of nature and the chef-d'œuvres of art, like a man who wanted neither taste nor imagination. But this did not prevent him from prosecuting the study of that profession in which he had already distinguished himself so much. He attended the practice of the public hospitals, connected himself with the first masters of the art, and made extracts and translations of the best works on Italian surgery. It was fortunate for him that he had employed himself in this manner, for on his return, his porte-feuilles were the only defence which he could oppose to the law against emigrants. It was, he said, to enrich his native country by useful knowledge that he left it, and this was deemed a sufficient excuse, probably because he was possessed of nothing worth confiscation. Even his former situation excited no envy; for during his absence they had suppressed all the academies, all the universities, and all the schools. There was now no regularity in the practice of medicine; and every one treated his patients as he pleased, and cured them as he could.

But the people who caused all these suppressions, soon found out that, though it might be superfluous to learn every thing else,

they could not well dispense with a knowledge of medicine. All France had flocked to the frontiers, and after unparalleled prodigies of valour and devotedness, the defenders of their country were left to perish of their wounds, from want of surgical assistance. From that time commenced the erection of schools of medicine, that long series of restorations, which the establishment of the university has united into one.

Fourcroy, at that period charged with the direction of these establishments, called the most celebrated masters of the capital to the school of Paris, and did not fail to place M. Lassus amongst the number; he was at first nominated to the chair of the history of medicine and medical jurisprudence, but he preferred afterwards that of external pathology, though he was equally capable of doing justice to either; he was master of several languages, and his first literary productions were translations of some English surgical works.*

His discourse, *sur les découvertes faites en anatomie par les anciens et par les modernes*, prove at once his great learning and discernment.† Some memoirs in the 'Mémoires de l'Academie de Chirurgie,' and in a journal which he undertook along with M. Pelletan, shew both the extent of his knowledge and the correct views which directed his practice, and which make us regret that he did not publish his observations in a general work. His *Médécine Opératoire* ‡ and his *Pathologie Chirurgicale* § are works of considerable merit, exhibiting great perspicuity, sound principles, and a happy selection of what is most useful for the minds of young students. The same character applies to his public lectures, which were admirably adapted for the various capacities of his hearers. For he did not think it degrading to descend to the level of the understandings of his pupils, that he might the more faithfully perform his duty towards them in his office of instructor.

M. Lassus pursued his profession with an enthusiasm which gained him all the advantages which it could afford. Beloved by his pupils and patients, cherished by society, of which his sweet disposition and natural cheerfulness constituted him the

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* Nouvelle Méthode de traiter les Fractures et les Luxations, par M. Pott, avec la Description de nouvelles Attelles de M. Sharpe pour le Traitement des Fractures de la Jambe, Paris, 1771. Manuelle pratique de l'Amputation, par Ed. Atlanson, 1774.

† Paris, 1783, 1 vol. in 8vo. Traduit en Allemande, par Creveld.

‡ Traité élémentaire de la Médecine Opératoire, Paris, 1795, 2 vols. 8vo.

§ Pathologie Chirurgicale, ibid. 1806, 2 vols. 8vo.

charm; useful to all who approached him, he had the good fortune of succeeding in every thing he undertook, and was happy even in the manner of his death, which was nearly what he wished. An acute disease, which deprived him of recollection, put an end to his life in five days, on the 16th of March 1807.

The chair which M. Lassus occupied in the Ecole de Médecine is now filled by M. Richerand; his situation of librarian to the Institute has been given to M. Charles; and he has been replaced by M. Percy, as member of the Council of Health to the army.

FOURCROY:

The history of the long line of celebrated characters who have belonged to the Academy of Sciences, during a period of a hundred and thirty years of its existence, is rich in instruction of every kind. For the most part, we have been accustomed to contemplate them with a pleasing interest for the simplicity of their manners, the serenity of their lives, passed far from the bustle and agitations of the world, devoting themselves to science, and deriving all their happiness from its cultivation. The learned of our age have not, however, all enjoyed this good fortune. The great events which were taking place opened a new field for their exertions; and some of them, seduced by the hope of improving the condition of their cotemporaries, have been induced to come forward on the tumultuous theatre of public affairs, imagining that a mind adapted for researches after truth would easily direct them in the restless crowd, incessantly agitated by conflicting interests. The most cruel misfortunes, however, persecution and death, have been in many instances the punishment of their excusable error. Even those who succeeded in some measure, have had but too much reason to regret the calm of the closet, and the peaceful labours which would have awarded them the approbation and respect of the world, while in their other career, intentions the most pure did not shield them from calumny, nor benevolence the most active, protect them from ingratitude. The illustrious individual who is the subject of one of M. Cuvier's most interesting éloges, has more than once given himself up, in the bitterness of his heart, to such reflections and comparisons; and in his most prosperous moments, when surrounded with flatterers, as well as in his hours of retirement, he would incessantly recur to the time when, without any influence but his talents, he was run after by thousands of auditors from every nation where science was cultivated or encouraged; and could count, as it were, on having as many pupils as there were enlightened chemists in the world.

His life, so instructive in this view, is not less so in other

respects. It shews the power of exertion and resolution in mastering fortune, as well as the insufficiency of fortune to procure happiness; it is moreover intimately connected with the most brilliant epoch of the history of science, and holds an important place in that of the political regeneration of France.

Antoine-François comte de Fourcroy, Councillor of State, Commandant of the Legion of Honour, Member of the Institute, and of the principal learned Societies of Europe, Professor of Chemistry to the Museum of Natural History and to the Faculty of Medicine, &c., was born at Paris, 15th of June 1755. He was of an ancient and distinguished family, though his father belonged to a branch which had been reduced by degrees to comparative poverty, for he carried on the business of compounder of medicines, and that only by virtue of a situation he held in the house of the Duke of Orleans. The Corporation of Apothecaries obtained the suppression of all such situations, and that event completely destroyed the only remaining fortune of Fourcroy, the father; so that his son, as soon as he could think, found himself involved in the ruin which the monopoly of the privileged corporations had brought upon his family. Of this misfortune he always retained the most vivid recollection, and the more so as he was from his infancy possessed of an extreme sensibility.

At an early age he was sent to college, where fresh injuries awaited and served to fix the aversion of his young heart against the world. He had the misfortune of being placed under a brute of a master, who took a dislike to him, and neglected no opportunity of frustrating all his attempts at advancement. This tended to give him a distaste for study, and he quitted the college at the age of fourteen, not much more instructed than when he entered it. If he had been rich, it is probable that the disgust which a bad master had inspired, would have destroyed those happy germs of science which nature had planted in him; but adversity still followed him, and became a more useful master, which repaired the wrongs of the other. A person is shocked to see a young man, destined to become one of the most illustrious philosophers, reduced at that time to earn a scanty subsistence by teaching children to write. We are assured, that he then formed the resolution of turning comedian, and that probably he would have become one, if one of his companions who made such an attempt before him, had not been hissed from the stage in his presence. It is said that he then turned his thoughts to medicine, and in fact, soon afterwards, by the advice of Vicq-d'Azyr, he determined to embrace that profession.

That great anatomist had known and esteemed Fourcroy the

father, and struck with the happy physiognomical resemblance of the son, and the courage with which he struggled against his hard fortune, he administered consolation and encouragement, promised him support and direction, and kept his word. Fourcroy has been heard to his latest breath, to speak with the tenderest gratitude of this protector of his youth. At that time, and in his circumstances, it was not an easy matter to become a physician, and in the days of his greatest prosperity he has been known to relate the most amusing anecdotes of the straits to which he was frequently reduced. Lodged in a miserable apartment, he supported himself as he could; sometimes by giving private instructions, by making researches for other writers more rich than himself, and sometimes by making translations which he sold to a bookseller;—a poor resource, for he never received more than half the money agreed upon. It is true, the conscientious Bibliopole was very willing, some thirty years after, when his creditor became Director-General of Public Instruction, to pay the rest.

His patient endurance of privations, and his ardour for study, would easily have repaired the deficiency of his early education, and qualified Fourcroy for his profession; but something more was wanted, for it was necessary to become a licensed physician, and the expense of this, at that period, amounted to six thousand francs.

An old physician, Dr. Diest, had left the Faculty certain funds, for the purpose of granting, every two years, gratuitous degrees to the most deserving poor student. M. Fourcroy, in 1780, became a candidate for this prize. His natural abilities, and his great acquirements, readily placed him in the first rank, and he was about to obtain the only means of subsistence which now remained, when the corporation-spirit became still more prejudicial to him than it was to his father. A ridiculous quarrel at that time existed between the Faculty charged with the instruction of medicine and conferring degrees, and a Society which Government had established, for collecting observations calculated for extending the limits of the art. The dispute was still further fomented by the share which the public took in it, and to sarcasms succeeded injuries, calumny, and downright fury.

The animosity of the Faculty made Vicq-d'Azyr the principa object of its hatred, and Fourcroy, being the known protégé of Vicq-d'Azyr, was rejected for that sole reason. Thus one of those men who have done the greatest honour to medicine, would have been for ever deprived of the title of physician, if the Society, in an opposite but far more noble spirit, had not made

a collection to defray the expences of his reception. They could no longer refuse him the simple degree of doctor, but that of *docteur-régent*, depending on the suffrages of the Faculty, was withheld.

The grand obstacles being thus surmounted, and M. Fourcroy once permitted to exercise his profession, his fortune now only depended on the reputation which he might acquire, and as it was necessary to accomplish this object as expeditiously as possible, he chose the path of scientific research, as being that which most ordinarily leads a physician to speedy fame, and being less dependent on the caprice of opinion.

His first productions shew that he had only to choose the department of science where he wished to distinguish himself. In chemistry, anatomy, and natural history, he was equally conversant. In his *Abrégé de l'Histoire des Insectes* we readily recognize a pupil worthy of Geofroy, and his *Description des Bourses muqueuses des Tendons* was not less worthy of the school of Vicq-d'Azyr. The Academy of Sciences gave an honourable testimony to his talents as anatomist, for it was as such that he was received into their number in 1785. Notwithstanding this, he early gave the preference to chemistry.

Bucquet was, at that time, the professor most followed in the capital: his judicious arrangement, and clear ideas, his propriety of expression, and the warmth and sublimity of his language, attracted even people of the world to his lectures. He soon appreciated the talents of his pupil, and one day, when some sudden sufferings prevented Bucquet from giving his lecture, he engaged Fourcroy to take his place. In vain did the young man allege his inability, and his inexperience of the world, and represented that hitherto he had only spoken before a few of his companions: the master insisted, guaranteed success, and pressed him, in the name of friendship, to undertake the task: Fourcroy vanquished, mounted the chair, and the first time he ever spoke in public, delivered a lecture of two hours without hesitation, and without confusion, as if he had been a consummate professor.

Bucquet, who was fast hastening to his grave, from that moment saw in Fourcroy the heir of his talent; but he did not treat him as most people treat their heirs; on the contrary, he zealously directed public favour towards him, and generously lent him his amphitheatre and laboratory. It was with Bucquet that Fourcroy gave his first course, and composed his first Principles of Chemistry. An advantageous marriage furnished him with the means of purchasing the cabinet of his master after his death; and though the Faculty did not permit him to succeed to

the chair of Bucquet, they could not prevent him from rapidly succeeding to his reputation.

The chair of chemistry at the Garden of Plants having become vacant by the death of Macquer, in 1784, the public voice declared for M. Fourcroy, so much so that M. de Buffon, the Intendant at that time, received more than a hundred letters in his favour, written by the principal scientific characters of the day. M. de Buffon nevertheless hesitated, for Fourcroy had for a rival a great chemist, protected by a great Prince; but the more numerous recommendations prevailed, and Count Bertholet has felicitated himself since, for having, in losing a place, gained such a fortunate promulgator of his discoveries. During more than five and twenty years the Garden of Plants has been to Fourcroy the principal field of his renown.

The vast scientific establishments of the capital, where the most celebrated masters display to a numerous audience, qualified to be umpires of their talents, the profound doctrines of modern science, remind us of what is most noble in antiquity. We seem to recognize those assemblies where a whole people was animated by the voice of a single orator, and those schools, where men crowded to listen to the oracles of a sage. The lectures of M. Fourcroy, at least, corresponded exactly to this double picture. In him Plato and Demosthenes appeared combined. Nature had admirably qualified him for his office; a well connected method, a great flow of elocution, a nobleness, propriety and elegance of terms, which appeared to be the result of long study; a rapidity, brilliancy and novelty of ideas, as if suddenly inspired, delivered with a flexible, sonorous and silvery tone, penetrated to the utmost corners of his vast auditory. Sometimes his discourse, flowing in a smooth and majestic stream, carried conviction by the grandeur of the images, and the pomp of the style: sometimes, varying his manner, he descended insensibly to an ingenious familiarity, securing attention by touches of the most amiable pleasantry. You might there see hundreds of attentive auditors, of all classes, and of all nations, pressed against each other, afraid to breathe, with eyes intently fixed upon his, and hanging as it were on his lips, *(pendent ab ore loquentis)*. His piercing eye pervaded the whole assembly; he could discriminate at once on the most distant benches the sceptical mind which still doubted, the dull spirit which could not comprehend; he redoubled his arguments and his images; he varied his expressions till he found those which suited their several capacities; language herself seemed to place all her stores at his disposal, and he never quitted a subject until he saw the whole of his numerous auditory satisfied.

This unequalled talent shone most bright at a period when science was making the most unparalleled progress. At the period when Fourcroy began his course, Bergman had given mathematical precision to the analytical processes of chemistry. The aeriform elements of bodies began to be ascertained and distinguished; Priestley was every day adding to the list of new gases; the theory of heat assumed a new aspect in the hands of Black and Wilke; Cavendish and Monge discovered the composition of water, and finally, the genius of Lavoisier, by the strength of reflection, found out the secret of combustion, which is in itself the key-stone of chemistry, and submitted the principal phenomena of organized bodies to the laws of that science.

Fourcroy was not ashamed to adopt and promulgate the discoveries of his cotemporaries; and his pupils, from every quarter of the globe, were sure of learning from his lectures whatever was new or interesting in chemistry. These he disseminated with such impartiality, zeal and enthusiasm, that he was pleasantly called the Apostle of the new Chemistry, a title which, in his eyes, appeared more glorious than any which could be conferred upon him.

The six editions of his Course are all equally interesting, as exhibiting successive monuments of the incredible progress of a science in so short a space. The first, of 1781, consists of only two volumes, without being too concise; and the last, of 1801, in ten volumes, contains nothing superfluous. The work unites to historical interest, so much clearness and perspicuity, that it has become the elementary book of almost all Europe. It has been translated into eight or ten languages. It has been printed in modern Greek, and is shewn at Athens, at Smyrna and Constantinople.

It may therefore be said, with great truth, that but for the extraordinary activity of Fourcroy, modern chemistry would not have obtained the universal assent which it now enjoys; but it would be appreciating his services imperfectly to confine them to his exertions as a teacher. He has also greatly enriched the science, but it was with a view of becoming a better teacher that he enriched it; and it may be observed, that from Aristotle to Newton, the men who have most advanced human knowledge, taught publicly. The details of his experiments and researches he consigned to particular Memoirs, more than sixty of which are to be found in the volumes of the Academy of Science, the Institute, the Society of Medicine and Agriculture, the *Annales de Chimie*, and the *Journal de Physique*, and *Journal des Mines*. He undertook a periodical work for collecting the applications of chemistry to medicine, and for three years conducted the *Jour-*

nal des Pharmaciens. The *Annales du Museum d'Histoire Naturelle* originated with him, and contain many of his papers.

It cannot be expected that works produced in such abundance should be absolutely perfect, and we must allow that in Fourcroy's Memoirs, the views are in general more extensive than profound, and that his conclusions are occasionally too hasty. He has frequently been obliged to correct them himself, and sometimes others have done that for him. Yet we cannot deny that his results are always precise and evident, that he viewed his principal object in every possible light, and treated it by every agent which chemistry possessed. There was much order in the course of his experiments, and above all an admirable clearness in the exposition of them.

The principal experiment of Fourcroy in general chemistry was that of the combustion of inflammable air. Cavendish and Monge had discovered that that combustion produced water, and thence concluded that water was composed of hydrogen and oxygen; but the water which they obtained in this way was more or less mixed with nitrous acid; a circumstance which the opposers of the modern chemistry seized upon as a conclusive objection. Fourcroy, Vauquelin, and Séquin, succeeded, in 1792, in obtaining perfectly pure water by operating with more slowness; and observed, that the acid resulted from some particles of azote which were always mixed with the oxygen, and burnt along with the hydrogen, when the combustion was too quick. M. Goettling, a German chemist, had drawn another objection from the circumstances that phosphorus emitted light in azotic gas, which was considered pure; but Fourcroy and Vauquelin shewed that the phosphorus dissolved in the azote, and burned only in consequence of the small portion of oxygen which remained in it.

Fourcroy discovered several compounds which detonate by simple percussion, and which have all oxygenated muriatic as a base, united with various combustibles. He made a great number of analyses of minerals, both in a concrete state, and of mineral waters. Of the latter, the analysis of the sulphureous water of Montmorency, made in conjunction with M. de la Porte, in 1787, deserves notice, as it became a model of that sort of analysis, so important to medicine. It exhibits a much more exact method than that employed by Bergman, as advantage is there taken of the means pointed out by Priestley, to preserve and examine the elastic constituents.

One of the most curious phenomena observed in our time, is that of the meteoric stones which fall from the atmosphere, and the composition of which, always uniform, resembles no

other stone known on the earth. M. Fourcroy laboured with Vauquelin to establish its peculiar character, which constitutes the most essential proof of the existence of such a singular phenomenon.

It was in his researches on minerals, that Fourcroy discovered the means of distinguishing and obtaining, in a state of purity, the two earths called barytes and strontian, so closely allied to the metals by their specific gravity, and to the alkalies by their other properties.

Platina, or white gold, a substance which we get from Peru, and which, being heavier and more endurable than gold, is at the same time capable of taking a polish like brass, passed for a simple metal. The researches of Descotils, Wollaston, and Tennant, carried on nearly about the same time, proved that it is mixed with four other metallic substances formerly unknown. One or two of these substances were observed by Fourcroy and Vauquelin, who were examining platina about the same time as the chemists just mentioned.

There is a mineral called *arragonite*, which is to this day the stumbling-stone of chemistry and mineralogy, because with a christaline form, a hardness, a density, and a refrigerating power, different from that of calcareous spar, it exhibits the same elements as that spar, and in the same proportions. Fourcroy and Vauquelin contributed to establish this hitherto inexplicable fact. It has been since found that the *arragonite* always contains a small quantity of strontian.

At the time when so many churches were appropriated to different purposes from what they were originally designed, an immense quantity of bells was delivered for sale. These noisy instruments are composed of copper and tin, in a proportion which renders them useless for any other purpose. It was necessary to separate these metals to make them of any use, and this at first appeared impossible. M. Fourcroy proposed to oxydize, that is to say, to calcine a part of the alloy, and to mix it with another part, which was not oxydized. The oxyde of copper of the first portion abandons its oxygen to the tin of the second, and leaves the copper pure, in a state of fusion. This process, in a moment, put France in possession of mines of copper, and was extensively employed by the manufacturers.

M. Fourcroy has made some very extensive researches into the nature of saline combinations; his history of sulphuric acid and its salts, is a work of great patience, and fills up an important chasm in chemistry. Government having employed him to examine a new species of Quinquina, brought from St. Domingo, he effected such a detailed analysis of it, and employed such new

means, that it has become a model for vegetable chemistry. Vauquelin, Saussure, and Thénard, have carried this branch of science much farther, but he paved the way for them; and towards the latter part of his life, he made several analyses of grains and leguminous plants, which have thrown much light on the theory of germination, such as that of spoiled wheat, and the juice of onions, so remarkable for the manna which is formed during its fermentation. He was the first who discovered in vegetables the substance called *albumen*, which forms the base of the white of the egg. Before his time, a principle called *aroma*, was admitted to exist in vegetables, but he demonstrated that odorous bodies affected the sense of smell, merely by the volatilization of their own proper substance. Formerly, the acids obtained by the distillation of woods and gums, were considered as peculiar acids, but Fourcroy and Vauquelin have proved, that they are only acetous acid, modified by an admixture of oil, and this discovery has led to the economical substitution of these acids for vinegar in a great number of cases. His theory of the formation of æther is the one which still appears the most probable.

But of all the researches of Fourcroy, those which have proved most fruitful, and gained him the greatest celebrity, are his researches in animal chemistry. He himself attached particular importance to these, as they appeared to form an intimate relation between chemistry and medicine, and he considered their prosecution especially incumbent on him, as he filled the chair of the Faculty.

He determined the quantity of azote, extracted by means of nitric acid, to depend on the degree or animalization which each substance possessed, and in the course of his investigation, he did not leave a single solid or fluid undetermined as to its composition.

One of the most curious facts which was presented to him in the course of these investigations, was afforded by the Cemetery of the Innocents, in 1786. The Government having resolved to suppress that focus of infection, which had for ages received the bodies of most of the dead of the capital, not only prohibited any more from being buried there, but ordered those which were deposited to be removed to another place, an operation attended with no small danger, and performed by MM. Thouret and Fourcroy, with no less ability than courage. The greatest part of these bodies wa found converted into a white substance, unctuous and combustible, and in its principal characters resembling spermaceti, procured from the head of the whale. From minute examination of various circumstances, and a comparison of other analogous facts, they were enabled to shew that this

metamorphosis takes place in all animal matters preserved from the contact of the air in humid situations; and we have been informed that, in England, advantage has been taken of this fact, to convert into matter fit for burning the flesh of those animals which are not destined to be eaten: so far this proves, that there is not one of our observations, however trifling they may appear, which may not become useful to society.

Fourcroy himself considered his researches into the nature of urinary calculi, and diverse bezoars, as more important than all his other discoveries, as in them he perceived an immediate application to practical utility. Before his time we were acquainted with only one species of calculus, the nature of which had been determined by the illustrious Scheele. M. Fourcroy, in 1798, conceived, in consequence of some experiments of Mr. Pearson, that there might be different kinds of concretions; upwards of five hundred specimens of human calculi were sent to him from different quarters, which he examined and compared with those of other animals, with bezoars, aud various other concretions. He not only determined their composition by analysis, but assigned them proper external characters, by which they might be discriminated at first sight, in the same way as naturalists distinguish minerals. It was ascertained by his investigations, that the calculi of herbivorous animals were capable of being dissolved by injections of weak vinegar, and there exists some hope that the same effect may be produced on some of the human concretions. At the same time that he examined the nature of urinary calculi, he made several important observations on the composition of the urine of man and animals, the results of which are extremely interesting, both in a chemical and medical point of view. The urine of herbivorous animals is very different from that of man; but the principles of the latter is found in the excrements of birds. Another striking physiological fact discovered by Fourcroy is, the resemblance in composition between the seminal fluid of certain animals, and the fecundating pollen of some plants.

This is a slight sketch of the immense collection of facts and experiments with which Fourcroy enriched chemistry, and if we do not find his name attached to some of those great truths which have immortalized other names, we meet with it inscribed to so many articles of merit, that he must ever be acknowledged as one of those men most worthy of public gratitude.

In many of his most important labours, the name of Fourcroy is associated with that of Vauquelin, his pupil; and the zeal and constancy with which the pupil co-operated with the master, is a not less uncontrovertable proof of the sentiments

which Fourcroy could inspire, than that the man who could choose such a judicious friend deserved to be esteemed. This remark is more necessary at a time when the recollection of long discords has produced so much animosity, and when every one who enjoyed a share of power has become a mark for the attacks of a malignant public. M. Fourcroy must have been more exposed to this fate than any other person, partly from his having been called to fill high situations, and partly from the irritable sort of associates with whom he had to co-operate. At a period when a whole nation thought they had all at once discovered their misfortunes, and set about making every kind of experiment on themselves, and made trial in their turn of every man of celebrity, it was almost impossible for him to escape the popular choice.

Nominated to the National Convention he entered as Deputy in the autumn of 1793, at the moment when France was groaning under the most terrible tyranny, and committing its blackest crimes. After what we have related of his former life, it is easy to judge with what feelings he entered on his public career.—To an almost perfect ignorance of the world and its affairs, was joined in him no small degree of bitterness against the established order of things, which was in some measure excusable, considering how much they had contributed to his early disappointments. But though qualified in every respect for expounding those general views which all were then disposed to hear, he never mounted the tribune, notwithstanding the many temptations he had, contenting himself with managing some obscure departments of administration, and satisfied with having obtained the pardon of some intended victims. Darcet, one of our associates, owed his life to his interposition. He called before the Convention the most respectable learned characters, whom a false revolutionary spirit had every where persecuted. At last, however, menaced himself, he found it impossible to serve any one, and this inability has by some malignant creatures been accounted to him as a crime. "It is impossible," says M. Cuvier, "for the historian to overlook a circumstance which tended to embitter the whole of this celebrated man's life; and most assuredly, if in the course of our inquiries we had discovered the slightest ground for an accusation so attrocious, no power on earth could have constrained us to pollute our lips with his eulogy, or made the vault of this temple, dedicated as much to honour as to genius, resound with his praise."

Fourcroy did not enter on his public functions till after the 9th Thermidor, when the restless spirits of that era were exhausted by destruction, and during the long work of the re-

establishment of social order, we find him incessantly occupied with the public instruction, and always labouring to keep pace, in his restorations, with the march of prevailing opinion.—To this task he carried the same qualities which we have seen so eminently employed in the advancement of chemistry.—But here he had greater difficulties to encounter; instead of a simple experimenter, master of his instruments and materials, he found himself at the head of a new department, obliged to struggle with obstacles of every kind, and not unfrequently forced to benefit his fellow citizens against their inclination.

The Convention had destroyed the academies, the colleges, the university; no person presumed to hint at their restoration; but very soon the effects of their suppression were sensibly felt. The armies came to want physicians and surgeons, and these could not be supplied without schools; but who would have believed that any one would, one day, have the hardihood to call them *schools of medicine? Physician* and *Surgeon*, were titles too inconsistent with equality, probably because there is no superiority more necessary than that of a physician over his patient; they were therefore denominated *schools of health*, and there were no questions put to the pupils, nor any examination for diplomas. In the reformation which took place in this department, it is not difficult to perceive the intentions of him who effected it. The three great schools, founded at that period, are at this day the finest ornaments of the university. Experience soon taught, that for carrying on war courage is not sufficient without instruction, and that military science constituted no inconsiderable weight in the scale of success. The Polytechnic school, outstepping its original object, seemed destined to render the higher sciences as familiar as the elementary branches of knowledge had formerly been.

The conception of the central schools was no less grand in its kind—perhaps it attempted too much. It proposed nothing less than the establishment of a kind of university in each department, for which the youth were to be prepared by inferior schools in every district. But this project was executed only in part. The central schools always wanted these preparatory schools; the pupils placed in them did not always zealously conform to the plan; and what was still more fatal, it was not always easy to supply them with good masters, when so many had perished, and when party spirit prevented the employment of those who had escaped. A school had indeed been established at Paris to form these masters, so much wanted, but in the stormy times which terminated the reign of the Convention, only an ephemeral existence could be given to an institution,

which, more than any other, required a long time to produce the desired effect. M. Fourcroy, both as Member of the Committee of Public Instruction in the Convention, and as Member of the Council of Ancients, took an active part in these establishments, and made most of the reports which led to their formation. He had also no small share in the establishment of the Institute, and in digesting the law which has made the Museum of Natural History the most magnificent establishment which science possesses.

All these institutions bear the character of that grandeur and generosity which always entered into his views. Government, in his opinion, owed instruction to the people, by the same title that they were bound to guarantee them justice and security; and he considered it as necessary to appropriate a portion of the revenue of the State to this purpose, as to the maintenance of justice and personal security. We know that the enemies of Fourcroy have blamed him for employing, in some of his political discourses, the sort of language used at that time; but this was the fault of the times, not his;—many of the most useful propositions would then have been indignantly rejected, if clothed in other language; and as well might we blame those who negotiate with the savages of Canada for not making use of the style employed to harangue the princes of Europe.

On his retirement from the Council of Ancients, in 1798, M. Foureroy engaged in his great work, the *Système des Connaissances Chimiques*, a work of great extent, which he finished in eighteen months. But his repose was of short duration, for on the establishment of the Consular Government he was nominated Counsellor of State, and appointed to resume the labour which he had commenced for the restoration of public instruction.

In this situation the operations of Foureroy assumed another character, for with more vigour and connection they were less his own personal acts; but still they derived their chief direction and support from his superintendence. The numerous institutions which we now see united into one corps, submitted under a common code of discipline and laws, and governed by a chief appointed by the public, were all of his creation. But the university, above all, in the present moment of its splendour, ought never to forget him who founded it in times of difficulties and peril.

Foureroy made these schools the constant object of his attention, and visited most parts of France, to ascertain the progress they were making. "But it was the pupils who received the benefit of gratuitous education from Government," says M. Cuvier, "that were the peculiar objects of his affection.

He seemed to have the memory of the misfortunes of his own youth ever in his mind, and remembered, with gratitude, those who had assisted him in his education. How many will, one day, feel the same sentiments towards him! And how many parents join with me at this moment, in blessing the man who has bestowed upon their children the most precious of all gifts."

Though a deputy and counsellor of State, he was still essentially a member of the Institute, and though the charge of an arduous public administration imposed upon him new duties, he was not indifferent to the subject of his former labours. At last, so many occupations, to which the natural disposition of his character added so many cares, attacked his frame. Palpitation, on which a physician cannot be mistaken, apprised him of his fate. He foresaw it with more calmness than he had supported his former disappointments. To see his assiduity in his labours, and to hear him speak, no one would think him ill: he alone was not deceived. For more than two years he expected, every day, the fatal blow. Seized one day with a sudden attack, while signing some dispatches, he cried,—*je suis mort!* and expired.

This event took place on the 16th of September, 1809, the anniversary of the family festival. His relations, with whom he lived in the tenderest union, were accustomed to dedicate this season to joy and friendship; and as a testimony of their affection, brought flowers, and little presents of all kinds, to present to him, but which were destined, that day, to deck his tomb.

Thus do we, too often, see the most active men snatched away in the middle of their career; and happy are they, whose memory is handed down to posterity in some new discovery, some useful establishment, or in the recollection of some benefit conferred on their cotemporaries. M. Fourcroy has left behind him these three kinds of monuments, in an eminent degree. The archives of science are filled with his researches; France is covered with institutions which he helped to raise; an immense concourse of men, whom he had obliged, paid the last honours to his remains; and during the long time that he enjoyed power, a mark for calumny, and harassed by opposition, it is impossible to find one man, even amongst his bitterest foes, who can say, that Fourcroy ever did him an injury.

The situations which he occupied are now ably filled by the most meritorious of his pupils. M. Thénard has succeeded him in the Institute; M. Laugier at the Museum of Natural History; Gay-Lussac at the Ecole Polytechnique; and M. Vauquelin in the Faculty of Medicine.

ART. VIII. *Traité de la Fièvre Jaune. Par Jean Devèze, Docteur en Médecine de la Faculté de Paris.* Paris, 1820. 8vo. pp. 311.

THE Author of the work whose title stands at the head of this article, comes before us with no mean pretensions, and we must confess, with considerable claims upon our attention, from the great extent of his experience, and from the ability of the work; nor is our respect for his opinions in any degree diminished upon recognising him as the acute and original writer, who we believe to have been the first amongst our very modern authors on yellow fever, who denied its contagious nature, in his account of the epidemic which raged in Philadelphia in the year 1793, and which was published by him the following year. In this opinion he has been followed by Hunter, Jackson, Miller, Bancroft, Saveresy, Valentine, Burnett, Doughty, Ameil, and Dr. M'Arthur, and opposed by the equally respectable names of Clarke, Lind, Balfour, Chisholm, Blane, Berthé, Bèquine, Dalmas, Bally, Pugnet, Pym, and Fellows.

A residence of fifteen years in St. Domingo, from whence M. Devèze, owing to the disturbed state of the Colony, was obliged to embark for Philadelphia, along with the rest of the French fugitives, had already furnished him with sufficient experience in the endemic of the country. They arrived at Philadelphia in August 1793, at the very time of the first appearance of the epidemic amongst the inhabitants of that city. " A peine debargué sur cette terre hospitaliére encore accablé sous le poids du Malheur. J'appris qu'un grand nombre d'habitans de la contrée étoient attaqués d'un mal de gorge si violent, que quelques-uns mouraient en peu de joins; on ajoutait que cette maladie étoit contagieuse."

The French refugees, as was to be expected from their situation, could not fail of experiencing a share in the epidemic; and their numbers increased by the arrival of the troops, destined to suppress the revolution in St. Domingo, rendered it necessary to establish an hospital for the accomodation of such as were seized with the disease, at the head of which M. Devèze was appointed.

The character of the epidemic soon declared itself, " Il se déclara une véritable fiévre jaune," and as such it was immediately recognized by this experienced physician.

No sooner did this epidemic declare itself, than the College of Physicians of this city published a string of resolutions, which were founded on, and set out with taking for granted the

contagious nature of the disease, before any inquiry into, or proof of such a nature could possibly be adduced. The assumption agreed with preconceived opinions, and other causes, had at that time little influence on the minds of medical men. M. Devèze however at the time of his appointment to the hospital at Bush-hill, controverted the opinions of the resident physicians, and in 1794 published his opinions in a Memoir, entitled, " Recherches et Observations sur les causes et les effets de la maladie epidemique qui a ravagé Philadelphie en 1793.

M. Devèze arranges his work into three books or parts. The first he subdivides into the following chapters. 1st. Contains a description of the epidemic as it appeared at Philadelphia in 1793. 2d. An exposition of the modified character of yellow fever. 3d. An enumeration of the appearances observed upon inspection after death. 4th. A history of some cases which recovered, as well as of some with whom the means of cure was unavailing.

The second book he divides into three chapters; the 1st contains his opinions respecting the etiology of the disease under its different modifications: 2d he attempts to define contagion and infection, and to assign to each their separate laws: the 3d contains an application of those laws and phenomena which characterize yellow fever, as it appears under its epidemic form; and by details, both particular and general, to endeavour to determine the nature of this disease.

In the third book, the first chapter contains the treatment employed and recommended by M. Devèzes; the second chapter the prophylactic means to which we ought to have recourse.

In order that we may do greater justice to this very important subject, we shall confine ourselves to the matters principally contained in the first part of M. Devèze's work. At the same time that we draw frequently upon our own personal observation and suffering in this disease, while residing in a quarter the most inimical to European constitutions; we shall likewise condense the observations of our contemporaries, and present them to our readers, in conjunction with those of our author. The subjects discussed in the remaining part of the work will furnish a subject for more extended inquiry in a subsequent Journal.

M. Devèze enters upon the first chapter with a topographical description of Philadelphia; and from its situation upon a plain on the banks of the Delaware, intersected by large ditches, from which the winter's rain can only escape by evaporation, carrying along with it the detritus of the clay soil, and the vapours and gases arising from the decomposition of the vegetable and animal substances which cover their banks; from the sudden transitions

of temperature and humidity of the atmosphere, not only in regard to its annual or monthly variations, but in respect to what usually takes place within the twenty-four hours; concludes, that Philadelphia, from those combined causes, must frequently not only be the seat of sporadic cases of fever, but also of the more destructive epidemic forms of this disease. That the character of the fever which appears in the southern parts of the United States, should put on the same form with the fevers of tropical climates is indeed almost to be expected, from the excessively rich, deep, and absorbent nature of the soil; combined with the other adventitious circumstances of stagnant pools and ditches, filth of various descriptions, gases arising from decomposed organized remains, floating in an atmosphere, whose temperature, during the summer months, almost exceeds that within the tropics, and which, according to M. Devèze, was found by the French emigrants at Philadelphia more debilitating than they experienced at St. Domingo.

Another cause, and one which we consider to be the department in meteorology deserving the very highest consideration in the etiology of epidemic diseases, is the variable quantity of the electric fluid existing in the atmosphere. M. Devèze found it unusually variable at Philadelphia: Heuley's electrometer, which generally gave from twenty to twenty-three degrees, would frequently vary in an exceedingly short space of time, the quantity of this fluid would become so small as to be scarcely rendered sensible by this instrument; and again, after a few hours, it would mark the former degree of intensity.

M. Devèze remarked, that during the summer and autumnal months, wherein the epidemic raged in this city, the number of insects was unusually great. This we have observed to be the case in all very unhealthy situations and seasons in a tropical climate: and so firmly are we persuaded of its being indicative of disease, that we would venture, from this circumstance alone, to predicate of the healthiness of a place or season.

M. Devèze, in his description of the disease, divides it into three periods; which correspond with the stage of excitement, the gastric stage, and that of collapse, as adopted by some of our own writers. We shall not adopt the division of our author, but take the liberty of proposing such an arrangement of its periods as the phenomena, which occurred to our observation in Africa, at that time suggested. A correct delineation of the different periods of this disease will be found of the greatest utility in elucidating the different modifications of which it is susceptible; and in assigning our means of cure. With that impression we now proceed:—

The first stage is that of invasion, and marked by effects of a sedative cause upon the system; whether that cause be only local in its operation, and arising solely from the noxious gases and detritus arising from the decomposition of organised bodies or of the soil itself, in a heightened temperature of the atmosphere—producing sporadic cases of fever in unseasoned individuals:—or whether these more local causes in combination with peculiar states of the atmosphere, as it regards the state of the electric fluid contained in it, either operating upon the human system separately, or in conjunction with high temperature and moisture, and giving rise to the epidemic forms of the disease; still the primary effects observed in the system are of a sedative nature, which are taken collectively to mark the stage of invasion. They may occur individually or in part; their duration may be so short as almost to elude detection, or they may be prolonged. The same mode of operation upon the system marks, in our opinion, the influence of contagion, especially at the commencement—and however different the cause and the consequent phenomena which spring up during the course of the different diseases depending upon those causes, still the symptoms of invasion mark a sedative effect. Of contagion as connected with yellow fever, we shall at present forbear to speak, but proceed in our delineation of the symptoms marking the invasion of the disease.

All new comers into a tropical climate, are generally seized within the first twelve or eighteen months, and in sporadic cases at any time of the year; but more frequently upon the first setting in of the rainy season. The stage or period of invasion commences with debility and coldness, sometimes chilly rigors occur, lowness of spirits, inability to enter upon any mental or corporeal exertion, pulse feeble, sometimes slower than natural, and unequal, and sometimes intermittent and easily compressible; the features pale, a visage smaller than in health, anxiety at the precordia, which the patient attempts to relieve by frequently sighing; yawning often takes place, and sometimes a copious flow of urine. The patient frequently complains in this stage of nothing beyond a slight indisposition, which, from the failure of the digestive energy of the stomach, he attributes to disorder occasioned by some irregularity of diet. The tongue is generally white and trembling when attempted to be pushed out of the mouth, it is at other occasions natural. Pains in the loins and weakness of the joints, especially of the lower extremities, are generally present, with a megrim or nervous head-ache.—If a few sharp or rapid rigours take place in this stage, that of reaction often soon supervenes. The symptoms of invasion

may take place in the night and pass unnoticed, the person awaking in the morning with the symptoms of commenced reaction—or when the exciting cause of the fever has invaded the system, although not in a very sensible manner, and the person undergoing fatiguing exercise, or under the stimulus of a burning sun, he may be immediately seized with the stage of excitement, without being sensible of any premonitory symptoms.

M. Humboldt (in his Essay Politique sur la Mexique, p. 774) mentions an anecdote, which shews that this disease may be commencing its ravages on the system before the patient himself is aware of his danger. "A person," says M. Humboldt, "with whom I lived in the relations of friendship during my stay in Mexico, and who had remained a short time at Vera Cruz at the time of my first voyage from Europe to America, arrived at Xalapa without experiencing any sensation which could lead him to suspect the danger which he was about to experience.—'You will have the *vomito* this evening,' said an Indian barber to him gravely, who had been sent for to shave him on his arrival, and was in the act of soaping his beard, 'the soap dries as fast as I apply it, which is a sign that has never deceived me, during twenty years that I have exercised my calling.' This sentence, almost of death, made a strong impression on the mind of the traveller, but he persisted in endeavouring to convince the barber that heat of the skin did not evince the invasion of the disease; the barber also persisted in the infallibility of his prognostic, and the traveller, having immediately set out for Perote, was attacked that evening on his route, and was obliged to be conveyed back to Xalapa, when he narrowly escaped falling a victim to the violence of the disease."

The second stage after a slight or more severe invasion commences with head-ache, suffused and injected eyes, the countenance generally red and swollen; symptoms of increased excitement become general throughout the system, or is confined more or less to one of the great cavities or viscera, while an abstraction of the vital energy is experienced in other parts of the system, and the patient feels a burning sensation in some internal organ, while the extremities remain cold;—this more particularly occurs in the malignant form of the disease. The skin gives a burning and caustic sensation to the hand, and sometimes early in this stage partial perspirations over the face, neck, and breast break out; the pulse is strong and full, but seldom as yet above 90, equal and not compressible; the tongue dry and furred; the bowels generally confined; all the febrile symptoms become exacerbated; the pain, especially in the fore-

head, loins, and limbs, distressing, and a sense of pain and anxiety about the epigastric region now supervenes. The respiration is often laborious, interrupted and anxious, and the respired air feels unusually warm to the back of the hand when held near the patient's mouth, and seems to dry the fauces and mouth, and increase his desire for drink; deglutition becomes also more difficult, from a deficiency in the secretion of the salivary and mucous glands. Generally towards the end of the twenty-four hours, and as this stage advances, nausea and vomiting occur, the pulse becomes quicker, and the pulsation in the carotids and at the epigastric region, as the person lies on his back, may be counted at the distance of several yards; the heat of the surface becomes more acrid, thirst more urgent, and the eye begins to assume a yellow appearance; the abdomen when pressed upon, occasions considerable pain; the vomiting soon becomes more urgent, and delirium supervenes; the soreness of the stomach extends along the œsophagus.—These are the symptoms which mark the second period of this disease, and are present according to its malignance. In the non-acclimatés this period is generally well marked; but we must observe that in delicate habits, and in long residenters, when the exciting cause has been powerful, or during the prevalence of an epidemic form of this disease, the patient may sink gradually from it's overwhelming influence upon the energies of the system, without any signs of excitement manifesting themselves, and without any sensible remission.

The third stage or period, according to our division of the phenomena, is that marked by collapse in consequence of the previous excitement, and it answers to the second and third periods of M. Devèze. The countenance, from being turgid and florid, now becomes contracted and anxious; respiration becomes more difficult; pulse at first smaller and much quicker; the mouth and teeth more furred; the irritability of the stomach increases, and the matters ejected consists principally of the liquids taken, for which there is a constant and urgent demand. The vomiting, although not very violent at its commencement, unless after the reception of ingesta, affords a variably coloured matter, sometimes light and very acid, and setting the teeth violently on edge. This appearance generally exists, according to our own observation, at the commencement of the gastric symptoms, and in our opinion seems to arise from substances remaining upon the stomach in the invasion of the disease, and which, during the first stage or that of re-action, cannot experience the healthy process of digestion, but undergoes decomposition and the acetous fermentation into which

it more readily enters, from the increased heat of the system; and the matters thus altered from their irritation on the mucous membrane of the digestive canal, heightens the symptoms referrable to this organ. As the disease advances the matters evacuated from the stomach are mixed with bile, which, with the diseased secretions, exhibit an inky appearance, and has membranous flocculi floating in it. In some cases the patient obstinately refuses taking any thing, in order to avoid the distress occasioned by vomiting. The matters ejected soon become black, having the appearance of coffee grounds, and a burning sensation is felt in the stomach and œsophagus. Irritability of the bowels generally appear at the commencement of this stage or in the second, owing to the irritation of the mucous membrane of the stomach extending to the small intestines. The evacuations, which during the early periods of the disease, were scanty, and often with difficulty procured, become first liquid, sometimes mucous and glairy, afterwards streaked with tints of yellow and green, and at last greenish black, and sometimes bloody. With the appearance of diarrhœa; the pain in the loins increase, the urine becomes of a light brown, afterwards of a greenish brown, and of a muddy appearance. The yellow colour of the skin now becomes general, but sometimes it appears earlier in the disease, and gradually assumes a more dirty or dusky hue, and parts pressed upon, or improperly blistered very late in the disease, become livid and even sphacelated. The delirium, increases and becomes more low and muttering; the loins and limbs more severely painful, the latter drawn up, and the respiration more laborious; the face gradually assumes the Hippocratic character, and all the symptoms of great ataxy present themselves.

When this disease appears under the epidemic form, the accession of the stage of collapse is often marked by a delusive amelioration of all the symptoms, excepting the thirst and excessive vomiting, which very soon assumes a worse character. In the most malignant cases of the disease the pulse becomes in this stage very quick and small, frequently feeble, and during the last hours of existence, unequal and intermitting, then unusually slow; the breathing becomes also slow and stertorous, and the hand when held to the mouth of the patient gives a slight sensation of cold. The evacuations become involuntary, the urine becomes blackish, and sometimes bloody, and is passed insensibly; livid spots appear upon the surface, and blood distils from the mouth, nostrils, and anus, marking a relaxation of the capillaries and different tissues, and when

death closes the scene the body appears nearly arrived at a semi-putrid state, exhaling a tainted odour.

The duration of the symptom and stages are variable—the first stage is frequently passed unobserved by the medical adviser, owing to few patients coming under his direction until the symptoms have arrived to such a height as to alarm the patient. It may also elude his observation from being unusually slight, or from the shortness of its duration; but we believe it can always be detected by the acute and experienced physician. No case ever occurred to our own observation in which it was not manifest.

The second period, some times in delicate and exhausted constitutions, will be found quite inapparent to the most close observation; and in cases where persons in such a state have been exposed to the powerful action of the usual exciting causes of this disease, he may sink in its first stage, without any effort being made by the system against the noxious influence. M. Devèze has sometimes seen patients struck with the disease, accompanied by inexpressible terror and universal trembling, and expire after a few hours without any symptoms of re-action appearing.

The third period is the consequence of the second stage having advanced to such a height that the vital energies of the system are consequently exhausted; or from some important organ suffering a lesion incompatible with the relations of life, during the height of the excitement. It must be apparent then, when the second is not present the third cannot take place; and that the first period, or that of invasion, is the only stage truly essential to fever, whether it originate from miasmata or contagion, and that the subsequent stages follow only as an effect of this upon the system.

We have been more particular in the arrangement of the periods of the disease, and in the enumeration of the phenomena occurring in its progress; conscious that a correct conception of those stages, and being able to assign to each its limits through the progress of fever, whether yellow fever, or any other, will prove of the greatest consequence in pointing out our indications of cure; the exact period in which our most energetic remedies should be employed; and at the same time shew us, that if employed too early, or too late in the disease, they cannot fail of doing incalculable mischief. As we find also, that owing to a residence in a hot climate, from former disease, or from the habit and temperament of the patient, one or more of these stages may appear either more or less developed, or entirely absent; so must our remedial agents be altered, modified, or even counter-indicated.

The close observer of fever, as of the rest of the operations of nature, will feel an inward delight as well as instruction at every successive view; and the more he learns, the more desirous he will become to extend that information; regreting at every successive step of his advancement, the close limits which still must bound the horizon of his knowledge.

We shall shortly notice those symptoms which are peculiar to this disease. The black vomit which occurs in the last stage, is evidently owing to blood distilled from the capillary vessels of the mucous membrane, or from rupture of its minute vessels, by corrosion of its texture; which mixing with the bile and the other diseased secretions, bestows on this evacuation the dark colour. The same cause, operating frequently along the whole line of the digestive canal, gives the same appearance to the rest of the evacuations, and even to the urine. The violent irritation, and consequent inflammation in this tissue, arises in part from the altered ingesta remaining on the stomach, as well as from the increased action in the biliary organs, and consequent flow of bile into the stomach and duodenum, which washes along with it the mucous and other secretions; thus a naked and delicate texture is left highly sensible to the stimulus of any substance received. As these secretions become more vitiated, the irritation they produce upon this tissue advances to inflammation, and a train of consequent symptoms is produced. That the secretions become altered, and even vitiated, during the progress of the disease may be admitted. "Dr. Physick's hand," says Dr. Rush, "was inflamed, in consequence of its being wetted by bile in this state in dissecting a body."

Fear, or timidity, in the early stages, with resignation and a wish of dissolution in the last, are prominent in the worst cases of this disease; and we agree with Dr. M'Arthur in believing it to be a peculiar symptom of the disease. We always considered its absence as the most favourable feature, and however malignant the fever, when this symptom does not appear, we always entertained strong hopes of recovery. The yellow appearance which characterises this disease, we cannot suppose to originate from the absorption of bile in the circulation, but more frequently if not always, from a collapse of the capillary vessels, consequent to the violently increased action they have experienced during the re-active stage of the disease; or in consequence of the overpowered vital energy, which, as the debility advances, leave sthe half-dissolved fluid almost stagnant in their minuter ramifications. This opinion is supported by the late period of the disease, in which this symptom manifests itself. Hiccup is sometimes present, especially when in the course of re-action, the convex

surface of the liver becomes unusually excited. We saw this symptom occur in two patients, in a most urgent manner, immediately on the accession of re-action in the system. Our experience of this disease at the time was very limited, and we much despaired of their recovery; they however did recover. In others, when it occurred late in the disease, it generally proved a fatal symptom. MM. Berthé and Palloni (Observations Médicales sur le Fièvre régnante a Livourne, par Palloni,) found it in the epidemic that ravaged Andalusia in 1800, and Livourne in 1804, as a constantly fatal symptom. The experience of M. Devéze amounts to the same.

Several authors, but especially M. Saverésy (de la fièvre jaune en générale, et particulierement de celle qui a regné a la Martinique en l'an 1803-4, p. 261 et seq.), has made several varieties of this disease: M. Bally (sur le typhus Amerique ou fièvre jaune, p. 5.) admits two species—one contagious, the other not contagious. Our opinion upon the subject, and in which we are happy to be in some degree supported by a writer of so great experience as M. Devéze, is, that within the Tropics at least this disease appears without any essential difference, and is modified only by the length of residence, habit of body, the habitudes of the individuals, and the intensity of action, in the exciting cause; but the character of this fever will also be modified by its appearance, as an endemial or epidemic disease, but only in point of violence, in the course of the symptoms: because in the latter we have peculiar states of the atmosphere, depending, in a considerable degree, upon the quantity of electric fluid and moisture contained in it, superadded to, and affecting the system in combination with local or endemial causes.

Those causes cannot fail in being sufficient to account for the increased malignance of an epidemic to sporadic cases occurring in unseasoned individuals. This at the same time easily accounts for the native inhabitants escaping entirely from fever, except when it appears as a violent epidemic, then we find the mortality as great amongst them as among unseasoned individuals.

When cases of fever appear as an endemic, it is, we believe, more modified according to contingent circumstances, than when it appears as a wide spreading epidemy; and the newly arrived European, after having suffered one attack, will only experience an annual return of the regular intermittent or remittent of the country, provided he remains in it; but if to the local causes which gave rise to his seasoning fever, and which has continued almost annually to produce fever in the remittent form, the more general and continued action, and we may say,

the more effective cause of atmospheric influence (an influence, in continued action upon the surface of the body, and the delicate membrane of the bronchiæ and air cells, and these effecting such a change upon the nervous and capillary ramifications, subversive of the healthy relations in the systems,) no previous seasoning, and we will venture to say, no idiosyncrosy of constitution, or peculiarity of habit, will save any individual from its operation. Vigour of constitution, and an unrelaxed flow of animal spirits, will be the only preservatives, yet even these can not prevent its inroads during sleep. Much may be done, we are convinced, by prophylactic measures, though they will not always be found infallible. The type which this fever assumes is generally continued, especially in the unseasoned; but it frequently takes the remittent form in those who have resided any time in the climate. M. Devèze found the latter form most prevalent in Philadelphia, and the epidemic fevers occurring in the southern provinces of Spain has been proved by the researches of M. Berthé (Precis Historique de la maladie qui a regné dans l'Andalousie en 1800.) to assume the same character as those that appear in the New World. And since then M. Caizerques (Memoires sur la contagion de la fièvre jaune) has established the same opinion.

We shall now proceed to give a summary of the appearances observed on dissection, in those who have died of this disease, fully impressed that the treatment must be often inert, if not actually mischievous, without the torch of pathological anatomy for our guide. But at the moment we inspect with desired closeness the appearances after death, let us not fall into the error of taking the various and often opposite states of the textures, found upon inspection, as the cause of the disease,—an error the most fatal in medical logic; and if instead of commencing at the first link of the chain of causation, we begin at the middle or opposite extremity, our deductions and the treatment they lead to, must be erroneous. When we perceive the membranes of the brain sometimes inflamed, and congested, could we with logical strictness assert with Ploucqet, Clutterbuck, and Marcus, that inflammation of the brain is the cause? When, in our inspection of the digestive canal, we at other times find the mucous membrane inflamed, sphacelated, gangrenous, and completely detached in some parts, can we with Broussais, and his disciples, say that irritation or inflammation of the mucous tissue is the cause of this disease? or shall we recur to the older, and more philosophical opinions of Stahl, Hoffman, Cullen, Darwin, Beddoes, and Franck; or have recourse to the agency of the galvanic fluid according to the learned K. Sprengel; or

the ridiculous opinions of Mesmer, and the tenets distilled so clearly from the imagination of our German neighbours, and moulded into that immortal system of natur-philosophie, which may, like the translucent amber, be considered valuable in proportion to the number and variety of insects, straw, mud, &c. incorporated in its substance.

Before we can form any opinion upon the cause of fever, we must consider, and ascertain, so far as possible, upon what part of the system or tissue, the marsh miasma, contagion, or atmospheric influence first exerts its controul; what changes the exciting cause induces; in what manner this change operates in its turn in inducing further effects; and thus trace every link of the chain of causation, until we arrive at the extremity; whether that may lead to a return of a healthy exercise of the functions, or to an irreparable lesion sufficient to put a stop to the animal machine. Our investigations after death, can only disclose to our view the later effects in the chain of causation, the earlier ones are too fine for our gross senses; they may be inferred and almost demonstrated by the medical philosopher, but elude the knife of the anatomist; but while we acknowledge our inability to trace, by the eye, the previous changes, which gradually lead to greater, their magnitude should not make us despair, in endeavouring to break the morbid concatenation going on in the system; or even to restore the diseased structure to its healthy relations; and we are conscious no one can have greater hopes of medical efficiency, than the physician who has practised in a tropical climate; and the lights thrown upon the disease by post mortem inspections, will be his principal guide in warding off the fatal termination of the disease.

In taking a review of the results obtained by different physicians, the discordance is certainly remarkable. Nor can we avoid thinking, in the words of a philosophical physician and anatomist, that "when the senses were too much under the controul of preconceived theory, more see what they believe, than believe what they see." We must however allow, that the appearances after death will be much modified by the nature of the epidemic, when this disease rages as such. Thus the epidemic which ravaged the country around Bohemia, about the year 1811, evinced stronger determination to the head; and, consequently, diseased appearances in the brain and its membranes were most apparent; which circumstance, in fact, determined Marcus in adopting the cerebral cause of fever. Previous as well as subsequent epidemics occurring in different parts, and in fact through all Europe, has, according to an host of continental writers, evinced a predominance in one particular

train of symptoms. In some countries they have assumed a gastric character, in others inflammation of the mucous membrane of the intestines, has principally characterised the disease; this may also be considered as having had no mean influence on the opinions of M. Broussais. In others, the pectoral symptoms have predominated; and the pleura, the mucous membrane of the bronchiæ, and air cells, or disease of the heart, have more frequently taken place. The character of the epidemic in all temperate countries, will differ according to the prevailing constitution, age, mode of living, or habits of the people, amongst whom it makes its ravages; or according to the temperature and topography of the country. This difference in the character of the epidemic will be found less remarkable, immediately within the tropics, and will appear more marked as we advance in more temperate climates.

Rush, Palloni, and M. Devèze found the fat, and the serosity contained in the different cavities of the body, partaking of the yellow tint, when the subject died early in the diseas, it did not often appear until some hours after death. In patients who died late in the disease, a great part of the surface of the body partook of a violet colour, approaching to black, and gangrenous spots appeared scattered over its surface, and dissolved blood flowed from the nostrils, mouth and anus. Within a few hours the body fell into complete putrefaction; of which, in fact, the last stage of the disease was the commencement.

On opening the cranium M. Devèze observed, in general, all the membranes in their natural state, the brain firmer and whiter than usually found, the cortical substance slightly discoloured, the ventricles sometimes dry, at other times moistened by a yellowish serosity; the plexus choroides sometimes pale and discoloured, at other times gorged with blood. The sinuses of the dura mater were in like manner sometimes empty, and as often gorged by a black blood. Dr. Physick and Cathrall say they have generally found all parts of the brain in their natural state. Savarésy has sometimes found blood extravasated in different parts of the brain, its substance sometimes firmer than natural, and rather yellowish; but as often softer and whiter than usual. Dr. Bancroft found its volume apparently increased. And Frost found the Meninges inflamed. Bally deservedly esteemed for his pathological researches in this disease, found, in general, the brain neither changed in volume or consistence; sometimes its tissue appeared softer than usual, at other times he found only a congestion in the veins and sinuses of the dura mater, with a black grumous blood; at other times a bloody serum in the ventricles. The cerebellum, in certain

cases, as in Obs. 19, 21, & 23, appeared softer than usual; and in Obs. 20, 21, it appeared as if injected with blood: the medulla oblongata he found, in some inspections, more compact than natural; and in others it appeared as if compressed by a reddish serosity: the spinal cord which was only inspected in a small number of cases presented no alteration. Mr. Amiel, in his report of the Gibraltar fever, found effusions of lymph between the brain and pia mater, and a yellowish serum in the ventricles. Mr. Doughty found nearly the same appearances in the fever of Cadiz. We perceive how different the opinions of authors are upon the diseased appearances of this organ, and we shall not fail in finding them as discordent throughout.

In the few dissections which we have ourselves made in this disease, we have found the brain and its membranes as often in a healthy state as diseased; and when so, there appeared congestion of the veins and sinuses, with a half dissolved black blood; a serous effusion, slightly tinged with yellow in the ventricles and between the membranes; but without any blush of inflammation, either in them or in the substance of the brain itself.

The lungs are often found entirely sound; but Arejula and others found that in those dying late in the disease they were sometimes covered with black spots, containing grumous blood, and half dissolved in their texture; the heart flaccid; the auricles distended with black blood; the ventricles generally empty: the appearances we have described are confirmed by Messrs. Devèze, Physick, Cathrall, Bally, Berthé, and Palloni, the latter of whom has sometimes met with adhesions of the pleura, and often with the ventricles and larger vessels filled with carbonized black grumous blood: sometimes there were yellowish jellied clots in the ventricles. Savarésy found the ventricles of the heart full of blood, and which, with the auricles and larger vessels, leaving the heart, increased in their capacity, the trunks of the principal veins dilated, and the coronary veins engorged.

The appearances observed in the abdominal cavity have interested our continental brethren in a particular manner, and the very frequent appearances of disease in the mucous membrane of the digestive canal, in this disease, have furnished Broussais and his followers with an argument of no mean potency. The irritable state of the stomach and bowels being seldom absent in this disease, and in fact characterizing it so completely as to be in many countries the source of its name. The *vomito*, in the Spanish colonies, and black vomit, in America and West Indies, are names familiar to every one. But could our space

permit us, we might easily prove, that this affection only arises in the course of the disease, and seldom early in it; and that the appearances in this tissue, more frequently arise in the later stages from its delicate and lax nature, experiencing earlier than other texture sthat relaxation of the nervous energy, supporting the tone and vital power of the capillary vessels, ramified so copiously through itssubstance; and which relaxation it more readily suffers from the causes of irritation, which the ingesta and morbid secretions constantly flowing into it afford. Hence we seldom meet with the irritability of this tissue in the stage of re-action, or not until this stage is beginning to fail in its intensity, and its delicate structure, no longer sheathed by a secretion of healthy mucous or gastric fluid, becomes more sensible to the irritation of foreign stimuli. That this irritation, from the already mentioned cause, as well as this organ partaking of the increased sensibility, general throughout the system, may amount to inflammation, no one, who has seen the appearances met with in dissection, or who have witnessed the symptoms, can deny; but still it is inflammation, without tone or energy of the nervous system of the part, and consequent to previous changes in the system, operating in combination with adventitious circumstances. It is true, that in the most severe cases of yellow fever, and where no symptoms of re-action have appeared, that we have vomiting upon the reception of liquids, and soon after, the invasion of the symptoms; but the debility, and the increased sensibility account for this re-action of the parts upon any irritating cause, without our supposing that inflammation of the mucous membrane has sprung into operation immediately.

Viewing then the appearances of inflammation, sphacelation, &c. so frequently found on the mucous membrane of the digestive tube, as only the consequences of previous changes in the system, heightened by the concurrent irritation arising from the ingesta suffering decomposition or entering into acrid combinations; and from the increased secretion and vitiated state of the biliary and other fluids poured into the intestines and stomach; we cannot forbear concluding, that the diseased state of these organs has been greatly over-rated, by such as espouse the opinions of M. Broussais. M. Bally, in the numerous dissections which were made under his eye, found in many these appearances very limited, occupying only a very small portion of this tissue; and concluded that the appearances of its lesion is very much exaggerated. Many of our Gallic brethren, who have supposed they have found out the very cause and primary seat of this disease, and who, in assigning it "a local habitation

and a name," consider it nothing else "*qu'une gastrite,** ou, comme on l'entend dans le langage moderne, *qu'un egastro-enterite,*" and that all the concomitant disturbance of the system as only sympathetic of this inflammation. Our space will not permit us to enter into a serious refutation of this doctrine, and we believe there are none who have actually reasoned on the disease at the bedside of the patient, and who have traced the phenomena actually arising in the system from the first invasion of the disease, who will entertain it for a moment.

The mesentery has been found livid, its vessels and glands increased in volume, and distended with blood. The omentum has also been sometimes a little altered. The inflammation of the mucous coat has been, by the most accurate observers, found principally present in irregular streaks and spots in the stomach, jejunum, and small intestines. Dr. M'Arthur represents the appearance as if corroded by some acrid matter; sometimes large portions of the villous coat destroyed; the internal surface of the œsophagus inflamed throughou tits whole extent; the colon seldom exhibited much appearance of inflammation in its villous coat, but appeared contracted and the lower part of the rectum frequently excoriated. M. Devèze rarely found any diseased appearances in the spleen and pancreas; sometimes, however, the spleen has been found soft, and in an almost pulpous state. In the endemic fever of Africa, we have found this organ generally enlarged, gorged with blood, and friable in its consistence; this lesion has been most apparent when the disease assumed the remittent type. M. Valentine has observed sometimes the same appearances. The liver, we believe, has seldom been found in a completely natural state; even in persons of a previous good state of health, and newly arrived in a tropical climate, and even when no greater disorganization has been seen, there may very frequently be observed signs of increased action; M. Devèze has frequently found it unusually voluminous and gorged with blood, and in certain cases extravasations of a sanguineous fluid. M. Saverésy nearly coincides with Devèze, and further adds, he has generally found the portal veins congested with a reddish black blood; it's parenchema much altered, more soft and friable. Palloni has found the liver as frequently diseased as the intestinal tube, and appearances of inflammation and gangrene extending to both classes of organs. Rush in general found the whole

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* Vide Journal de MM. Béclard, Chomet, &c.

biliary system exhibiting diseased appearances. Dr. Johnson nearly coincides with him. Dr. M'Arthur, in upwards of 100 subjects dissected under his eye, found the liver, especially its concave surface, inflamed or otherwise diseased. M. Bally on the contrary, found this organ as often in a healthy state.—M. Devèze found the gall bladder generally empty; sometimes containing a small quantity of bile, of no marked acidity: in a few cases it was of great capacity, gorged by a thick bile and variously streaked. M. Bally found the gall bladder more frequently filled with a thickened viscous black coloured bile.—Dr. M'Arthur observed generally this reservoir turgid with a ropy bile, and in some instances its coats were one-fourth of an inch in thickness; at the same time he ascertained that the black substance found in the stomach was not bile, in which we perfectly concur with him, as well as in considering it to be evidently blood poured into the stomach, either from the relaxed orifices of the vessels, or from the excoriated and sphacelated state of the mucous membrane. The urinary apparatus appears to be less frequently altered from their natural appearance; sometimes the kidnies presented gangrenous spots upon their surface. Spots of inflammation sometimes are observed on the mucous coat of the bladder, which has been found to contain dark coloured sanguineous and fœtid urine.

We have presented to our readers the sum of our knowledge and personal observation, regarding the pathological anatomy of this disease—in which all the viscera has been found more or less diseased, either in point of frequency or extent. The internal surface of the stomach, jejunum, and small intestines, with the biliary system, has been found frequently in a state of lesion; next the brain and its membranes; afterwards the viscera of the chest, the spleen and pancreas, and serous membranes of the abdomen; and most seldom of all the parts of the system, the urinary organs.

ANALECTA.

The five following Cases, in which Moxa was employed, in different Diseases, were communicated to the Society of Practical Medicine at Paris, by Dr. Barde.

1. *The Commencement of Rickets, attended with lateral Curvature of the Spine, cured by the Application of Moxa.*

Anne Pourcet, aged nineteen, of a sanguine lymphatic temperament, the daughter of a broker residing in the division of Pourville, precinct of Thoulouse, (Upper Garonne) having ventured too near the sails of a windmill, she was struck by one of them, and thrown to the distance of ten paces; she fell on her back, and was unable to rise. Being carried to bed, she was rubbed for several days with vulnerary water, and camphorated eau-de-vie; during the first five days she was unable to help herself without the aid of several people. About the eighth she was able to walk a little, but with great difficulty, by the help of two sticks; but it was easy to perceive that she experienced a degree of bending towards the right side; thinking, however, that these effects of her accident would gradually disappear, no farther means were used than merely continuing the use of the frictions, which she had already employed. The lateral curvature of the body continuing to increase, she had recourse to a liniment, composed of oil, liquid ammonia, and camphor, the little advantage resulting from which induced the application of a large blister. The curvature, however, increasing to such a degree that she became diminished in stature, about two inches, when I was called in to render my assistance. On examining the vertebral column, I found a lateral inflexion almost equal to the quarter of a circle, the concavity of which was facing the right side: the patient could only walk with the greatest difficulty; the inferior extremities were become emaciated, attended with frequent desire to pass the urine; and any pressure of the curved part of the vertebræ, being attended with a dull pain. I applied three cylinders of moxa on the centre and convexity of the curvature, and the same evening the patient complained of less restlessness; she experienced less weakness of the legs, and passed a very good night. This amendment continued for several days; and the appetite and bodily power visibly improved. In proportion as the suppuration became established, and as the sloughs separated, not only was the progress of the rachitic symptoms suspended, but the curvature of the spine diminished insensibly; of the certainty of which I made myself sure by drawing a line with a thread, which extended from the spinous apophyses of the first cervical vertebræ to those of the last of the loins. Two months after the application of the moxa the recovery was complete; pressure on the vertebral column occasioned no pain; the lower extremities were become easy and free, and there remained no traces of the accident.

I thought proper, however, in order to confirm the cure, to subject the patient, for a long time, to the use of sulphureous douches (an operation similar to the pumping at our bathing places) on the dorsal region; and after awhile, she got into good health, she married, but has had no children.

In a note on this case, signed L. R. we have the subjoined remarks.—The author of this case believes, that by the application of moxa, he has cured a beginning rachitis, which developed itself in consequence of the hurt of the dorsal region.

The kind of curvature of the vertebral column, its quick appearance, the rapidity of its progress, and the recovery which so speedily ensued on the application of moxa, would rather incline us to believe that the lateral deviation of the column of the spine was owing to palsy; or rather to the extreme debility of the muscles of the left side, which were thus unable to counterbalance the action of those of the right. The debility existing in the lower extremities, and which equally yielded to the application of Moxa, seems to afford confirmation of our opinion.

2. *Chronic Ophthalmia successfully treated, by the application of Moxa.*

M. Francis Joug, a farmer in the commune of Issus, (Haute-Garonne), had long been in a state of darkness, arising from a chronic opthalmy under which he had laboured nearly six years. He had made use of resolvent collyaia, derivative bleedings, vesicatories, and setons, &c. without success.

I was called in on the 24th Thermidor, in the year 12, when I found the conjunctiva, both of the eye-lids and the eyes extremely red and swelled, and vessels injected with blood might be seen on the transparent cornea; the patient was able to bear the effect of light, as it only excited a feeble impression; and the sight was indistinct, so that he could only distinguish objects at a few paces distance. Persuaded that I could not expect any marked success, except by the production of some powerful derivation, I immediately applied the moxa on each temple, and inserted a seton in the neck, by means of a hot iron. The most happy effects, and far beyond what I durst hope for, immediately resulted from this treatment; the cessation of the gorging of the vessels of the cornea was evident in a very few days, the sight became stronger by degrees, and at the end of twenty days the ophthalmia had entirely disappeared.

3. *Chronic Pulmonary Catarrh, cured by the application of Moxa on the Chest.*

Margaret Beriol entered the Civil Hospital at Castanet in the month of February, 1807, labouring under a chronic pulmonary catarrh, which had resisted many modes of treatment, the more eminent of which were cooling and afterwards derivative remedies; of the last class of which were the seton, with ordinary and dry cupping on the chest. I proposed the moxa, which being agreed to, it was done on the lateral parts of the chest, two on each side, between the sixth and seventh true ribs. The most speedy relief was the result of this mode of treatment; the cough hitherto extremely violent, abated by degrees; the expectoration became less, the sleep returned, and the attending colliquative perspirations ceased. In a little time she became convalescent, received her strength, and got quite well. She left the Hospital in the month of May, and has enjoyed good health ever since.

4. *Rheumatic Sciatica, cured by the application of Moxa.*

——— Pradère, itinerant ginger-bread seller, of the commune of Fourqueveaux, (Haute-Garonne), was aged fifty-six, of a sanguineo-nervous temperament, a delicate constitution, and exposed to all the vicissitudes of the atmosphere, in all seasons, in consequence of his journeys to fairs and markets to dispose of his wares. In the middle of May, 1807, he experienced slight pains in the region of the loins, and on the upper and hind part of the thighs. The pains in the loins disappeared in a short time, but those in the thighs became extremely severe, so much so as to disable him in a very few days from walking. I do not correctly know what had been ordered for him by the Medical men who had before attended him; but, whatever this might be, thus much was certain, that the pain had increased in a violent degree. According to the report of the patient, and of the people

about him, he had during the space of six years applied anodyne frictions, afterwards others, with ammonia; next sulphurious baths, then leeches, blisters along the course of the sciatic nerve; latterly cupping glasses along the same course, and finally a seton inserted into the superior part of each buttock. In spite of of these the disease, which at first only occupied the upper part of the thigh, had gradually extended the whole length of the lower extremities. The patient who was at first able to get out of bed during the remission of the pains, and to walk a little by the aid of crutches, eventually found himself disabled from moving his limbs; and the violent and almost continual pains even prevented him from turning himself in bed.

I was called to the patient about the middle of October, 1813, when I found him in the following situation:—He was in a state of extreme emaciation; his wrinkled countenance exhibited the most lively expression of pain; he was unable to move in bed, and uttered loud complaints if any one rendered him the least assistance. He was eat up with a hectic fever, attended with evening exacerbations and nocturnal sweats; his legs were swelled to above the knees; he had no appetite, and could only support himself on the slightest food.

After this history of the disease and its treatment, I thought that nothing remained for me to use but the actual coutery, the which it seemed, had never before been thought on. I proposed the application of moxa, which was eagerly grasped at by the patient, whence I proceeded to burn four cylinders of cotton in succession, two on each thigh a little below the great trochanter, and on the course of the great sciatic nerve. When the operation was finished, the patient became able to get into bed without help and without pain; the evening paroxysm did not recur, and he had the same night five hours of sleep. This amendment continued the following days and the suppuration took place, which was very abundant; the patient became able to make use of his legs when necessary to make his bed, &c. the fever having diminished I tried to excite the action of the absorbents in the lower extremities, by aromatic vinous frictions over the whole extent of the serous infiltrations. For fifteen days however, from the application of the moxa, acute pains were perceived in the knees, which frightened the patient exceedingly, and led me to apply two moxa's on the external part of each joint, above the head of the fibula; the pains were suddenly relieved and no longer perceived. From this time the patient became better and better every day; he recovered his strength, and walked in the course of a few days round his chamber by the help of two assistants; in a few more days he was able to go alone with the aid of a stick; and finally, a month after the application of the moxa, he was able to get about his business, and to the great astonishment of every one, to travel anew to his old haunts, the which he had not done for seven years.

5. *Rheumatic Pain seated in the Epigastrium successfully treated by the repeated Application of Moxa.*

M. Francis Gaubil, of the commune of Auvergne (Haute-Garonne), aged thirty-six, of a sanguineo-bilious temperament, enjoying a good constitution, and coloured in the face, was accustomed, till his twenty-eighth year, to frequent hæmorrhages from the nose. During the winter of 1816 he experienced slight rheumatic pains in the joints of the lower extremities; which affection disappeared under the use of emollient poultices and local bleedings. About the month of March 1816 he was seized with shivering, followed by heat, pain in the head, and a violent rending pain in the epigastric region; he was repeatedly bled at the arm, and subjected to an antiphlogistic regimen. The more acute symptoms of the inflammation gave way to this treatment; but the pain still remained in the epigastrium, along with some degree of fever, the appetite did not return at all. By

and by the epigastric pain took a new degree of acuteness, and the patient finished by rejecting solid food; which compelled him to live on broths, jellies, and other aliments of little consistency.

M. Gaubil remained about two years and a half in this situation; during which period he was attended by Doctors Descleaux of Maret, Herisson of Mazères, and Clanet of Auterives. They prescribed, amongst other things, many local and revulsive bleedings, together with the use of domestic baths; they afterwards ordered the application of a vesicatory to the arm, which the patient kept open more than a year, and finally, but without any success, they sent him to the sulphureous warm baths of Ussat (Ariège.) The patient was reduced to an extreme state of meagreness; rejected all food, even liquids, had little fever, but he was harassed with want of sleep, insomuch that no means would procure it; the slightest pressure on the epigastrium excited the most excruciating pain, and the bowels were alternately bound and relaxed; but the diarrhœa yielded in a few days to light pottages made of pease or lentiles, little of which was retained by the stomach, the rest being rejected by vomiting. Having become extremely timid, and despairing of the resources offered by medicine, he confided himself to prayers and charms; yet at length it was thought proper to call me in. I saw him on the second of May 1819; and having examined him, together with the results of three consultations, written by the physicians already named, and in which they advised such means as are generally resorted to on such occasions; I recommended the application of a blister to the part affected with pain; and to render it the more active, I employed the ammonaical pomade of Dr. Gondret. The result of this was suspension of the pain for four days, but on the fifth it re-appeared, when encouraged by the success I had experienced from the use of moxa, the patient permitted me to use it instead of the blister, and I burnt a large roll on the epigastrium, which produced an eschar about the size of half a crown. The resulting inflammation of the skin surrounding the eschar was acute and extensive, so much so as to cause the application of emollient cataplasms; but the epigastric pain ceased to be felt; the stomach bore food very well, the nights became easy, and the sleep returned. Every thing went on well till the forty-second day from the application of the vesicatory, when the patient complained of slight nausea, together with a slight return of pains in the region of the epigastrium: a second roll of moxa burnt by the side of the first, dissipated these symptoms, which have not made their appearance since. The patient soon got well, was able to resume his business; and in a little time became very stout.

6. *Case of Facial Neuralgia.*

A robust man, aged fifty-three struck the right side of his head against a table, with such violence, that he fell down senseless; but the act was only followed at first with the ordinary symptoms of contusion. Two months afterwards, however, he was suddenly seized with a most violent pain, which spread over the forehead, and included the whole of the right cheek; the whole of the face also becoming subject to convulsive motions. The pain took place in paroxysms, which at first only occurred three or four times a day, by and by the attacks became much more numerous, and at length arrived at such a pitch that the patient could neither speak, eat, or sleep; the least motion also exciting or augmenting the pain. The first medical man consulted attributed the mischief to some deep seated caries, and had the whole of the upper teeth drawn on the side affected, all of which were perfectly sound. He applied in a state of despair to M. Ravin, on the 28th of June 1819; who divided the frontal branch of the ophthalmic nerve, at its passage out at the tuperciliary foramen, when the pain diminished. Two days after this operation, M. Ravin perceived that the pain did not commence at the usual place, nor did it hold the same course; so that, instead of beginning at the top of the head

near the middle of the parietal bone, it commenced at the forehead and then descended outwards towards the point of the eyebrow, from whence it seized on the eyelids and cheeks. Judging a second incision to be necessary, he divided the soft parts from the root of the nose to the temple, passing over the upper eyelid; when the pain ceased completely. The eyelid was attached to the forehead by two sutures, and the wound simply dressed with a pear-tree leaf; which is not attended with the inconvenience of sticking to the edges of the wound, as is the case with lint. *(Journal Universel, Avril* 1820.)

The disorder has not recurred during eight months, so that it is hoped the cure will be permanent; nevertheless, cases are by no means rare where a relapse has taken place after eighteen months or two years.

7. *Case of Maxillo-dental Neuralgia, by M. Boullard.*

An old soldier, exposed for twenty-eight years to all the changes of weather and the fatigues incident on warfare, was suddenly seized with an outrageous pain following the direction of the nerve of the skin, and which made its attacks twenty or five-and-twenty times a-day. Two applications of moxa on the side of the lower jaw lengthened the periods of accession; antispasmodic drinks, gargles of opium, pyrethram, alcohol, and sal ammoniac, the chlorine of potass mixed with powdered liquorice, narcotic and purgative pills, together with anodyne cataplasmas, nearly produced the same effect; so that after a period of two months only one attack took place in twenty-four or forty-eight hours. He was, however, willing to undergo an operation, which was done on the 7th of December, by Professor Richerand, who divided the maxillary dental nerve at its exit from the mental firamen. *(Journal Universel, Mars* 1820). The patient was able to leave the Hospital on the 27th of the same month, that is to say, twenty days after the operation.

8. *Cubebs.*

The following are the results of an analization of Cubebs, made by M. Vauquelin, at the request of the Société de Medicine de la Faculté de Paris:—

1. A volatile oil, nearly concrete.
2. A resin similar to that of balsa m of copaiba.
3. A small quantity of another coloured resin.
4. A gummy coloured matter.
5. An extractive principle, analogous to that which is found in the leguminous plants.
6. Certain saline substances.

"I hope," says the celebrated Chemist to whom we owe this memoir, "that this analysis, on which I have bestowed much care, will assist in affording some directions to the Physician who thinks it right to make use of the Cubeb."—(Bulletin de la Faculté de Médicine, 1820, No. 3.)

[Having already considerably exceeded our usual limits, we must delay our List of New Foreign Works till the publication of our next Number.]

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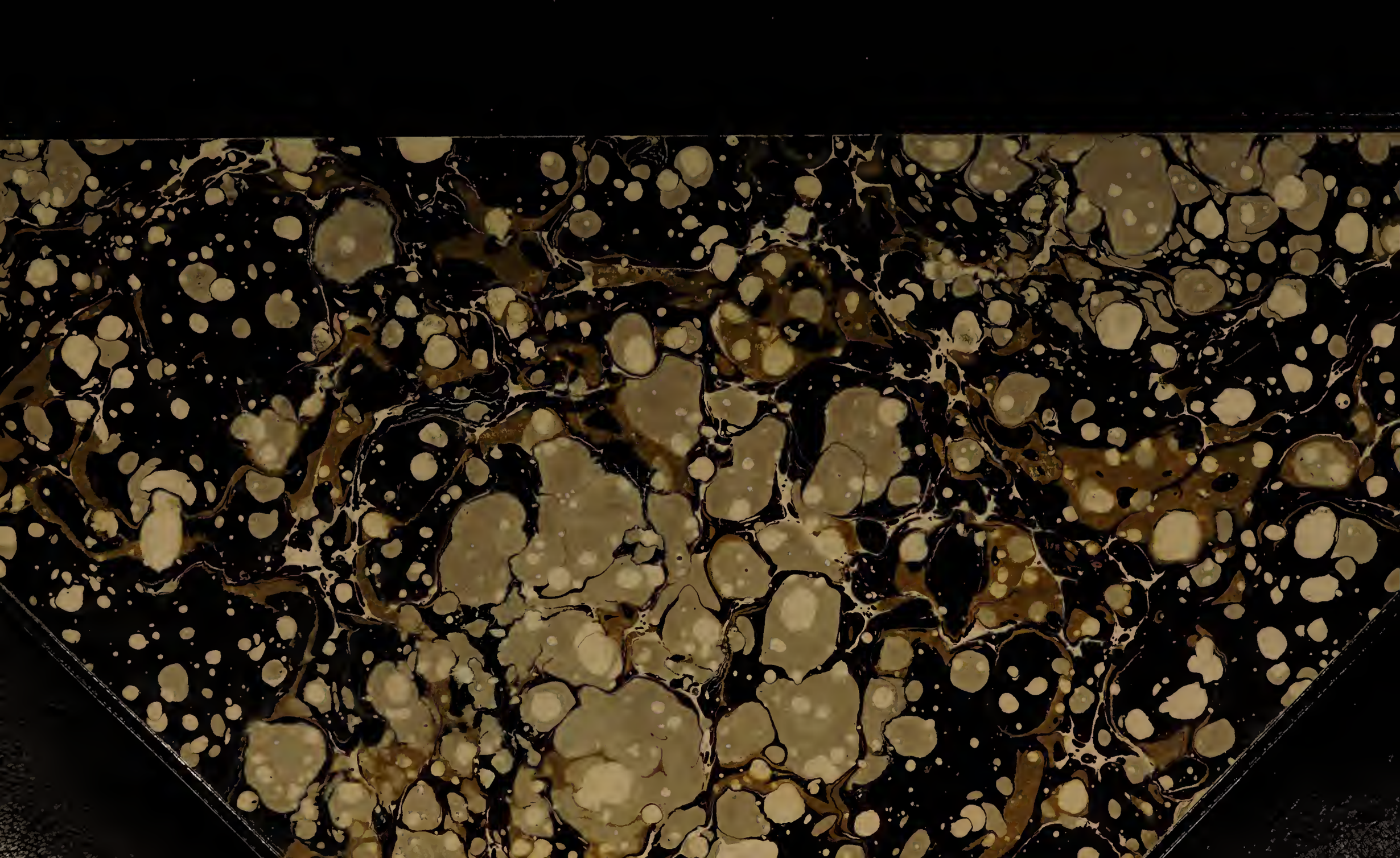
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